



National Weather Service Customer Satisfaction Survey

General Public

Final Report 2005

CFIGroup
Claes Fornell International



Table of Contents

INTRODUCTION	5
Analysis Methodology	7
Key Words for Understanding this Report	9
RESEARCH SUMMARY	11
Background	13
2005 Results	15
The NWS General Public Customer Satisfaction Model	16
Drivers of Satisfaction (Components)	20
Segment Analysis	31
Product Delivery / Format	34
Conclusions & Recommendations	35
SCORE DETAIL	37
Score & Impact Summary - All Customers	39
Non-Scaled Responses - All Customers	40
SEGMENTATION	43
Score Summaries - NWS Internal by Gender	45
Score Summaries - NWS Internal by Age	46
Score Summaries - NWS Internal by Region	47
Score Summaries - NWS Internal by Primary Source	48
Score Summaries - NWS Internal by Primary Reason	49
Score Summaries - Internet Panel by Gender	50
Score Summaries - Internet Panel by Age	51
Score Summaries - Internet Panel by Region	52
Score Summaries - Internet Panel by Primary Source	53
Score Summaries - Internet Panel by Primary Reason	54
Score Summaries - USAToday.com by Gender	55
Score Summaries - USAToday.com by Age	56
Score Summaries - USAToday.com by Region	57
Score Summaries - USAToday.com by Primary Source	58
Score Summaries - USAToday.com by Primary Reason	59
Score Summaries - Aggregate	60
QUESTIONNAIRE	65
MEANS AND FREQUENCIES FOR SURVEY QUESTIONS	87



National Oceanic and Atmospheric Administration
National Weather Service
General Public Customer Satisfaction

Introduction



Introduction

This report presents the results from the 2005 National Weather Service General Public customer satisfaction survey. The results presented in this report serve as a decision tool for use in conjunction with other customer and management information available to the National Weather Service.

The “Research Summary” section provides a discussion of the survey process and outlines the major findings from the analysis. The conclusions and recommendations that end the Research Summary give recommendations about how NWS managers may most effectively act on these findings. Following these are sections including further detail on survey results, means and frequencies for all survey questions, and the final questionnaire.

Analysis Methodology

The analytical methodology used to evaluate the survey results is consistent with that used in the American Customer Satisfaction Index (ACSI). The ACSI (www.theACSI.org), established in 1994, is a uniform, cross-industry measure of satisfaction with goods and services available to U.S. consumers, including both the private and public sectors. It is produced by the National Quality Research Center at the University of Michigan Business School under the direction of Dr. Claes Fornell.

CFI Group, a management consulting firm that specializes in the application of the ACSI methodology to individual organizations, uses the ACSI methodology to identify the causes of customer satisfaction and relates satisfaction to organizational performance measures such as the rate of customer complaints and customer confidence in the service they receive. The methodology measures quality, satisfaction, and performance, and links them within a structural equation model using a Partial Least Squares methodology. By using this system, CFI Group’s analysis overcomes customers’ inherent difficulty to precisely report the relative effects of the many factors influencing their satisfaction. Using CFI Group’s results, organizations can identify those factors that will most improve customer satisfaction and other measures of organizational performance.

The heart of the CFI Group methodology is the Customer Satisfaction Model, found on the next page. The model flows from left to right in a chain of cause-and-effect. On the far left side are **Attributes** - actual questions about various aspects of the National Weather Service’s performance from the survey itself. Only a handful is listed for simplicity purposes. These roll up into **Components** representing general areas of performance that drive **Customer Satisfaction**. The **Customer Satisfaction Index (CSI)** is measured separately by three questions - overall satisfaction, satisfaction compared to expectations, and satisfaction compared to an “ideal.”

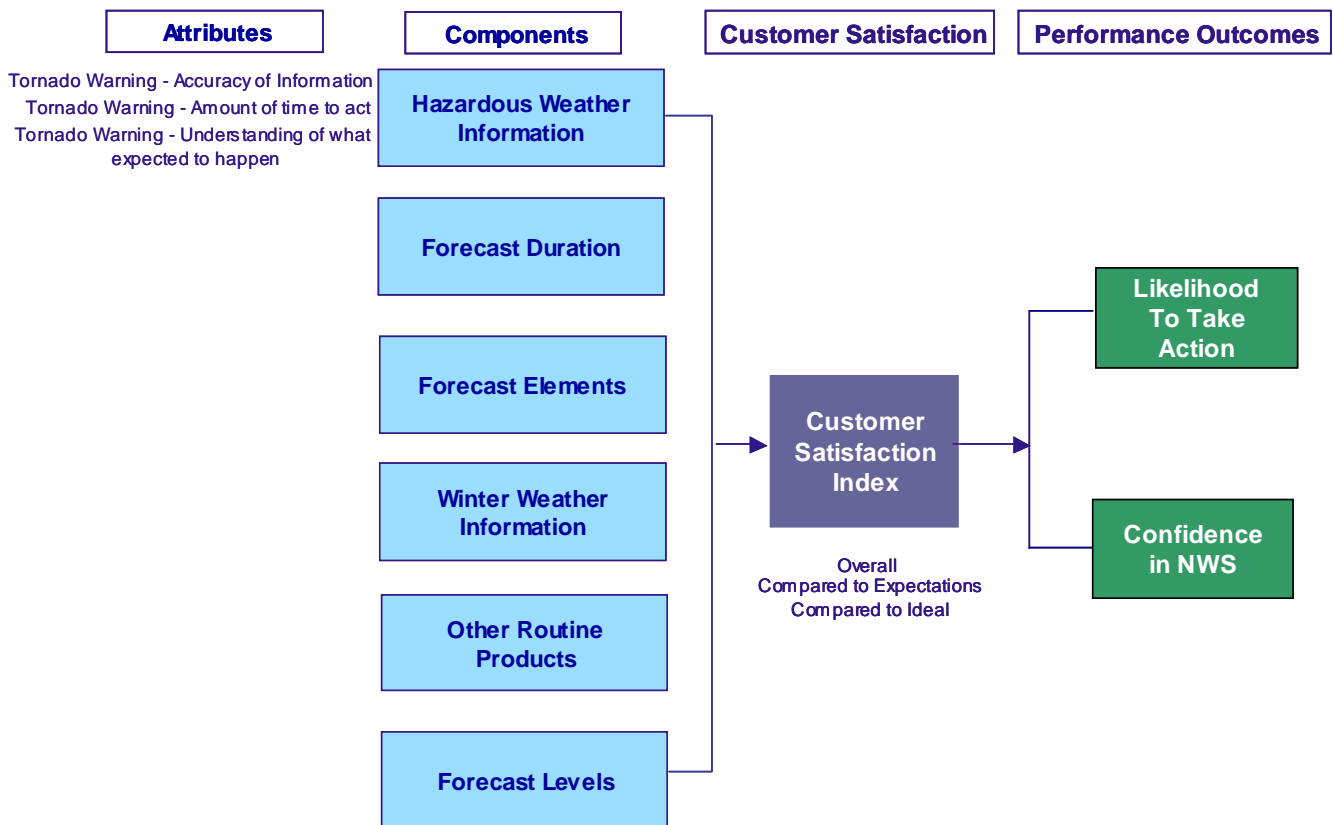


Introduction continued

The CSI is a leading indicator of the organizational **Performance Outcomes**, which include:

- likelihood to take action based on the weather information received from the National Weather Service
- respondents' confidence that the National Weather Service will do a good job of providing weather products and services in the future

As the National Weather Service improves its performance on Attributes and Components, the CSI will increase, resulting in improved outcomes. The results presented in this report precisely quantify both current levels of performance on all of the model elements, and the predicted impacts of quality and satisfaction improvements on performance outcomes. The analysis results help to pinpoint the areas of greatest leverage to drive these desirable outcomes, and thus serve as the springboard for NWS to develop successful and cost-effective strategies to continue to satisfy its customer base.





Introduction continued

Key Words for Understanding this Report

Results from this analysis are presented through various discussions, charts, and tables provided in this report. To understand these clearly, some definitions are in order:

Attribute – Attributes reflect different aspects or qualities of a component experienced by customers, which may contribute to satisfaction. Each attribute is captured by a specific scaled question from the questionnaire.

Attribute Rating – An attribute rating is the average of all responses to each question. Each rating has been converted to a 0-100 scale. In general, it indicates how negatively (low ratings) or positively (high ratings) customers perceive specific issues.

Component – Each component is defined by a set of attributes that are conceptually and empirically related to each other. For example, a component entitled “Hazardous Weather Information” may include questions asking respondents to rate “accuracy of Tornado Warning information” and “amount of time to act for Tornado Warnings”.

Component Score (or simply “score”) – A component score represents that component’s “performance”. Component scores tell how negatively (low scores) or positively (high scores) customers feel about the organization’s performance in general areas. Quantitatively, the score is the weighted average of the attributes that define the component in the CFI Group model. These scores are standardized on a 0-100 scale.

Component Impact (or simply “impact”) – The impact of a component represents its ability to affect the customer’s satisfaction and future behavior. Components with higher impacts have greater leverage on measures of satisfaction and behavior than those with lower impacts. Quantitatively, a component’s impact represents the amount of change in Overall Satisfaction that would occur if that component’s score were to increase by 5 points.



National Oceanic and Atmospheric Administration
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General Public Customer Satisfaction

Research Summary



Research Summary

Background

Discussions regarding the survey began in September of 2004 between CFI Group and Douglas Young and Andrew Noel of the National Weather Service. Prior to that, the National Weather Service had worked internally to establish goals for the project.

These objectives included:

- measure customer satisfaction for the first time for the general public, the National Weather Services' largest user segment
- assess the effectiveness of product formats and delivery methods
- measure the usefulness of routine weather forecasts and weather elements
- determine the public's understanding of and reaction to hazardous weather products
- identify areas where the greatest improvements can be achieved

Given these objectives, CFI Group and the NWS team went through several iterations over the next months. Collaboration within the National Weather Service was critical, and questionnaires were distributed to many internal groups for input and approval.

Data Collection

The survey was conducted via the web, February 15 – March 8, 2005, and three separate methods of data collection were utilized.

1. A static link to the survey was posted on various NWS Webpages, including the NWS Homepage (www.weather.gov), nearly all Weather Forecast Offices and National Centers generating public products. This data set will be referred to as NWS Internal throughout the report.



Research Summary continued

2. An Internet Panel was conducted to obtain a representative national sample. A third party online research company conducted the Internet Panel. Individuals falling under the requested demographics were recruited via the web and telephone and asked to take the web survey. They were offered entry into a sweepstakes for their time. It can be safely assumed that most individuals responding through the NWS websites are more familiar with NWS products and services than the population at large. The Internet Panel was utilized to capture the voice of a broader spectrum of the general public, including those who may not be familiar with the National Weather Service. The completed respondent pool was based on 2000 US Census figures and included:

- a. Male: 50% (48% US Census)
- b. Female: 50% (52% US Census)
- c. Age 18-25: 13% (15% US Census)
- d. Age 26-35: 19% (19% US Census)
- e. Age 36-45: 22% (22% US Census)
- f. Age 46-55: 18% (17% US Census)
- g. Age 56+: 28% (27% US Census)

3. Lastly, a link to the survey was placed in the weather section of the USAToday.com.

During the survey period, the following sample was collected and utilized for analysis:

Method	Sample Size
NWS Internal	10,062
Internet Panel	462
USAToday.com	74

Given the smaller sample size for the USAToday.com, results in this report will focus primarily on the NWS Internal and the Internet Panel.



Research Summary continued

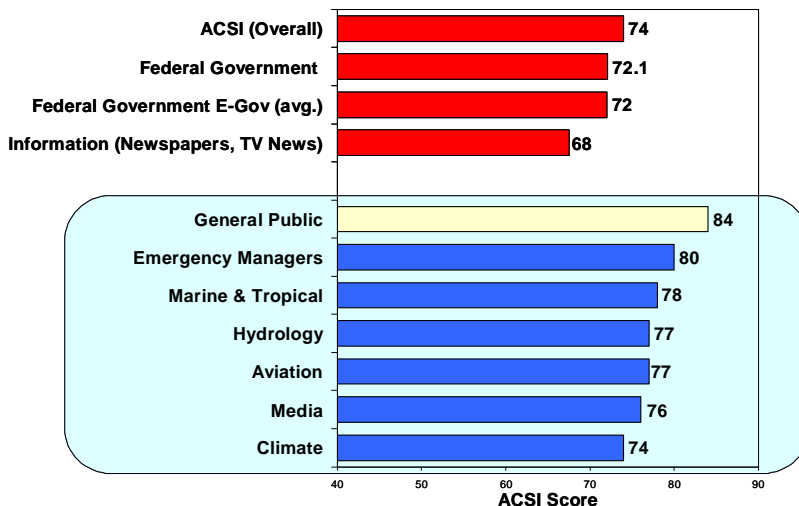
2005 Results

In the eyes of the general public, the National Weather Service does an outstanding job of providing weather information. The overall customer satisfaction score is 84, as rated by the NWS Internal respondent pool. The nationally representative Internet Panel rated the National Weather Service a 77, also a very strong score. The customer satisfaction score is comprised of three questions:

- How satisfied are you with the products and services provided by the National Weather Service?
- To what extent have products and services provided by the National Weather Service fallen short of or exceeded your expectations?
- Imagine an ideal organization that provides weather products and services. How well do you think the National Weather Service compares with that ideal institution you just imagined?

The difference in score between the NWS Internal and the Internet Panel is possibly due to the familiarity the NWS Internal respondents may have already had with the NWS products and services, given that they are linked to the survey from an NWS website. Additionally, as we will discuss later, the NWS information is more critical to the livelihood of NWS Internal respondents, and is more of a convenience for the Internet Panel.

Benchmarks are included in the chart below to illustrate how well the National Weather Service scores. The National Weather Service Internal score exceeds the overall ACSI of 74 (includes public and private sector), as well as the overall average for the Federal Government and the Federal Government E-Gov, 72 for both. The NWS also scores higher than surveys conducted over the past two years for other key audiences of the NWS, with scores ranging from 74 for Climate to 80 for Emergency Managers. These scores were also obtained via NWS website links.





Research Summary continued

The National Weather Service General Public Customer Satisfaction Model

The National Weather Service General Public customer satisfaction model for the NWS Internal data appears on page 19. It is constructed of three sections: drivers of satisfaction (also called ‘components’), satisfaction, and performance measures. Products have been grouped together where conceptually and empirically it made the most sense. Note that in some cases, products have been grouped together to form one component, e.g., Forecast Elements includes attributes based on the usefulness of Watch/Warning/Advisory Headline information in addition to the other weather elements, including air quality, sky cover, etc. The same is true for Other Routine Products. This was done for three reasons:

1. The data for these different products was highly correlated, and combining them increases the reliability of the impacts.
2. Conceptually, in each case, these products made sense to group together.
3. Because of the similarity in each of the products, conclusions and recommendations are applicable across the board.

Performance outcomes represent the desired outcomes of increasing satisfaction. Again, the desired behaviors include an increased likelihood to take action based on the information received from the NWS and increased confidence that the NWS will do a good job of providing weather products and services in the future.

Analysis of empirical data from the satisfaction model gives rise to two types of quantitative results: “scores” and “impacts”. A **score** is the weighted average of the individual ratings given by each respondent to the survey questions. Questions are asked on a 1 to 10 scale, with one being “poor” or “not at all useful” and 10 being “excellent” or “very useful”. Scores are converted to a 0-100 scale for reporting simplicity. The score is best thought of as an index, with “0” meaning “poor” and “100” meaning “excellent”. The scale is relative, such that 72 is higher than 68, which is higher than 62, and so on. The scores do NOT represent percentages.



Research Summary *continued*

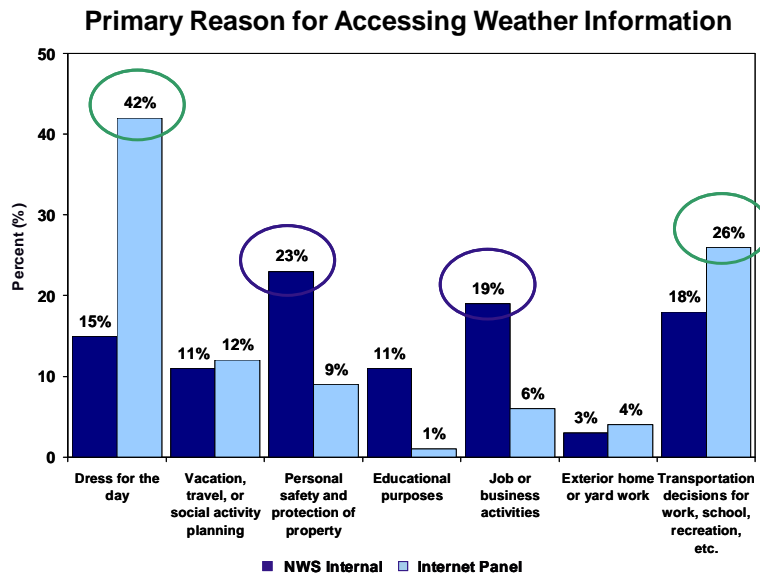
Impacts represent the change in satisfaction and/or ensuing performance measures that would occur given a change in a component or satisfaction score. Mathematically, an impact is equivalent to the predicted change in Customer Satisfaction that would result from a 5-point change in a driver. Similarly, a 5-point change in Satisfaction would move performance outcome measures by the amount of the impact. For example, based on the NWS Internal impacts, if the score of the Hazardous Weather Information component were to increase by 5 points, 85 to 90, then Customer Satisfaction would increase by the amount of the impact, or 2.7 points. Likewise, if Customer Satisfaction were to increase by 5 points from 84 to 89, Confidence in the NWS would increase by 3.7 points from 89 to 92.7.

Impacts are relative to one another and are additive. If the NWS were to improve its scores for the Hazardous Weather Information products and the Forecast Duration products, each by 5 points, Customer Satisfaction would improve by 3.4 points, the sum of the impacts. Components with higher impacts are generally recommended for improvement first. A low or “zero” impact does not mean a component is unimportant. Rather, it means that a five-point change in that one component is unlikely to result in improvement in the target variable at this time.



Research Summary continued

The chart on the next page (Scores and Impacts NWS Internal, USAToday.com, and Internet Panel) illustrates impacts for the Internet Panel also. While Hazardous Weather Information is clearly the highest impact component for the NWS Internal user group, the Internet Panel holds Hazardous Weather Information (1.6) almost equally as important as Forecast Elements (1.7). These impacts can possibly be explained by the responses received for primary access reason. The chart below illustrates that the NWS Internal respondents are focused primarily on obtaining weather information for personal safety and protection of property (23%), as well as job or business activities (19%), while the Internet Panel overwhelmingly indicated that they access weather information for purposes less related to livelihood; dress for the day (42%) and transportation decisions for work, school, recreation, etc. (26%). While weather information affects daily life for the Internet Panel respondents, they use it to determine what to wear/do that day, the NWS Internal respondents (the active users) use weather information for personal safety or job related decisions.



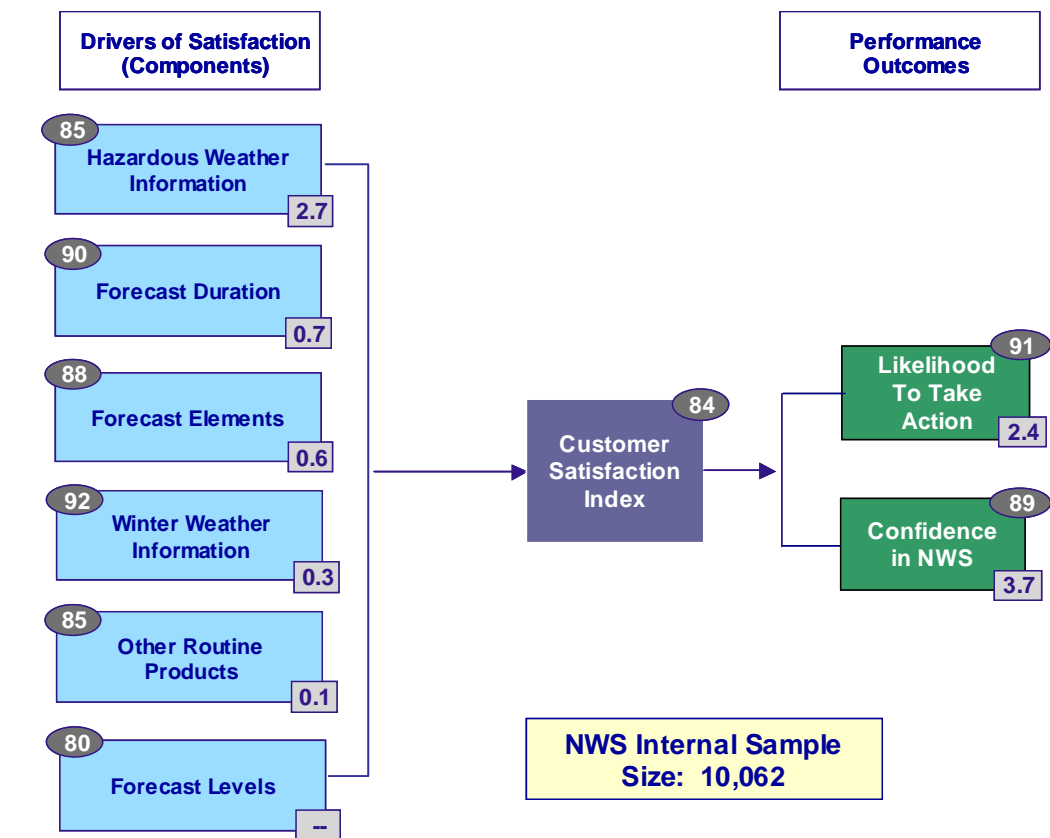
Note that the CSI, at 84 for the NWS Internal data, is lower in score than the majority of its drivers. Again, the Customer Satisfaction Index (CSI) is measured independently of the components with three survey questions (overall satisfaction, satisfaction compared to expectations, and satisfaction compared to an “ideal”); it is not an average of the scores for the model components themselves. By including expectations and ideal in the index measure of Satisfaction, we create a ‘higher standard’ for Satisfaction relative to the components, which measure specific performance items. As a result, we often see the CSI score lower than the individual component scores.

The key point to keep in mind is not how the score levels relate to one another, but rather that improvements in the Satisfaction drivers will lead to increases in Customer Satisfaction, regardless of score levels.



Research Summary continued

NWS General Public Customer Satisfaction Model (NWS Internal Data)



Scores The performance of each component on a 0 to 100 scale. Component scores are made up of the weighted average of the corresponding survey questions.

Impacts The change in target variable that results from a five point change in a component score. For example, a 5-point gain in Hazardous Weather Information would yield a 2.7-point improvement in Satisfaction.

Scores and Impacts (NWS Internal, USAToday.com, and Internet Panel)

	NWS Internal		USAToday		Internet Panel	
	Score	Impact	Score	Impact	Score	Impact
Hazardous Weather Information	85	2.7	84	2.6	81	1.6
Forecast Elements	88	0.6	87	0.7	83	1.7
Forecast Duration	90	0.7	86	0.7	84	1.0
Other Routine Products	85	0.1	76	0.2	54	0.2
Winter Weather Information	92	0.3	91	0.3	86	0.3
Forecast Levels	80	--	79	--	77	--
Satisfaction	84	--	77	--	77	--
Likelihood to Take Action	91	2.4	88	2.5	81	3.4
Confidence in NWS	89	3.7	83	3.8	83	3.9
Sample Size	10,062		74		462	



Research Summary continued

Drivers of Satisfaction (Components)

Score gaps for the components for NWS Internal vs. Internet Panel run consistently between 3-7 points, with the exception of "Other Routine Products" (85 for NWS Internal and 54 for the Internet Panel). For these products, the Internet Panel respondents may have been seeing them for the first time, and would therefore be less familiar with them. This is discussed in more detail on page 29.

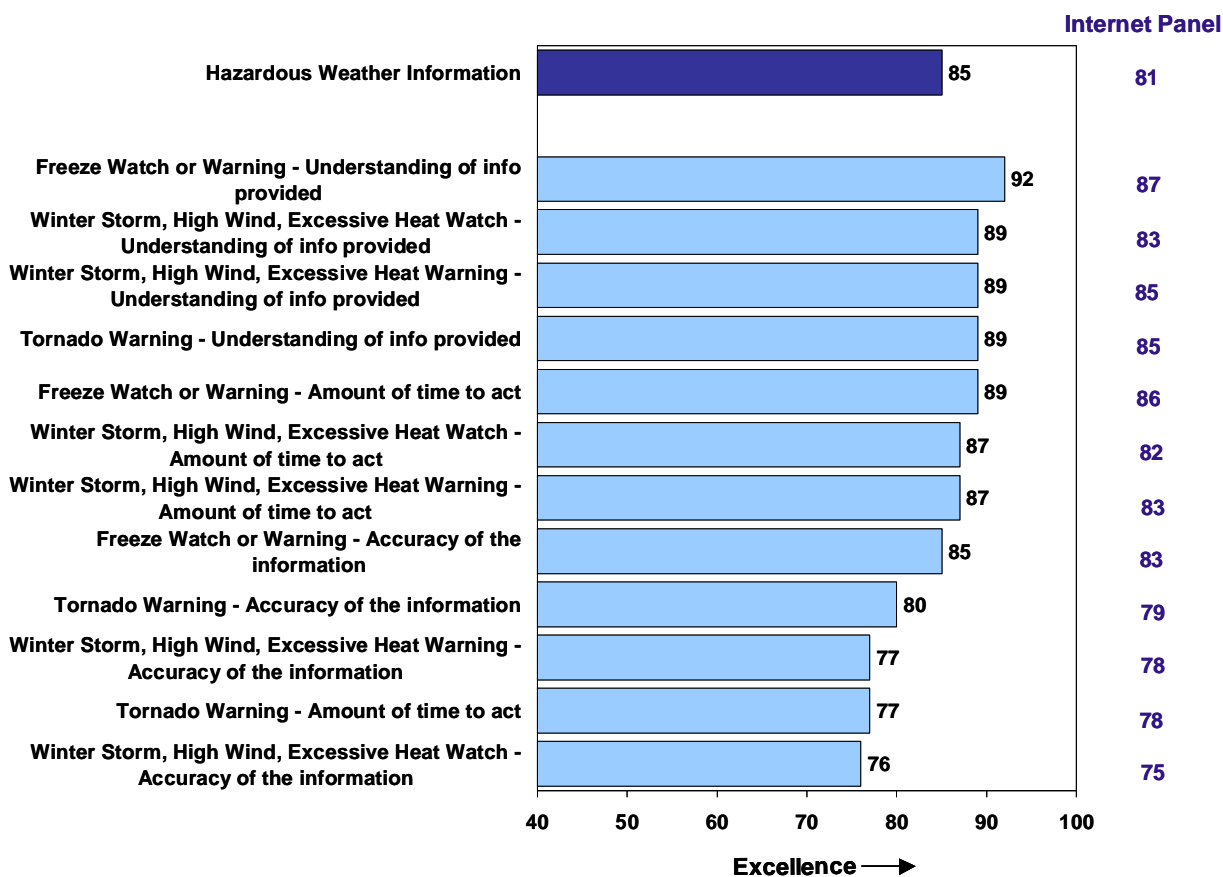
Each component is discussed in detail on the next several pages.



Research Summary continued

Hazardous Weather Products

Again, hazardous weather information is by far the highest impact component for the NWS Internal data (2.7) and is one of the two highest for the Internet Panel (1.6). The items in this component are very high scoring, and support should continue at its present level. As you see below, among the three attributes that Freeze Watches or Warnings, Winter Storm, High Wind and Excessive Heat Watches and Warnings and Tornado Warnings were rated on, accuracy of the information receives comparatively low scores. Note, however, that scores in the high 70s are still considered strong. One customer verbatim suggests that most of the general public understand the inherent challenges in providing the most accurate weather information; "More accuracy for a longer term...[the NWS] is as accurate as possible given the technology and the variability of the atmosphere." While the NWS should strive to make every forecast as accurate as possible, there also exists an opportunity to educate the general public, as some of them apparently do not realize that there are scientific and natural limitations to what the NWS can predict. Additionally, note that the attribute, Tornado Warning - Amount of time to act, is also among the lower scoring attributes at 77. Is this score, which is still quite good, driven by the respondents' perception that they do not have enough time to act or is it because tornado warnings are short-fused events relative to the other types of hazards evaluated?

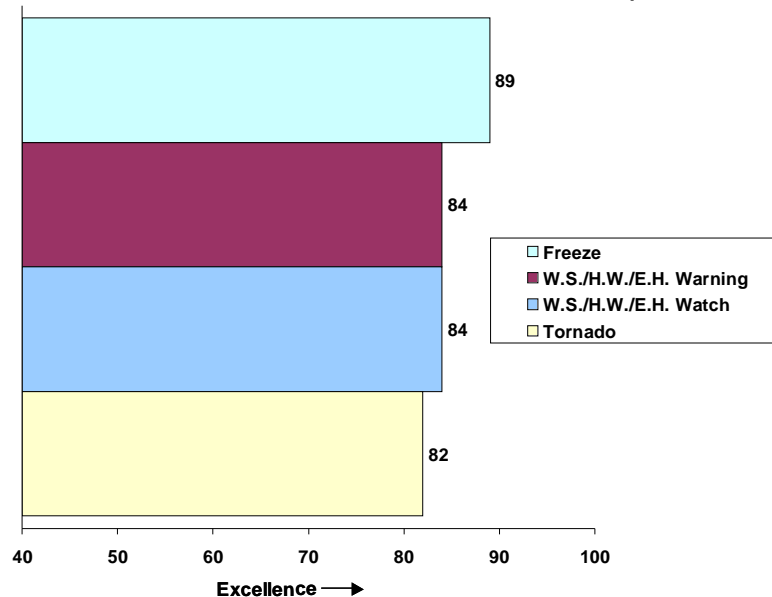




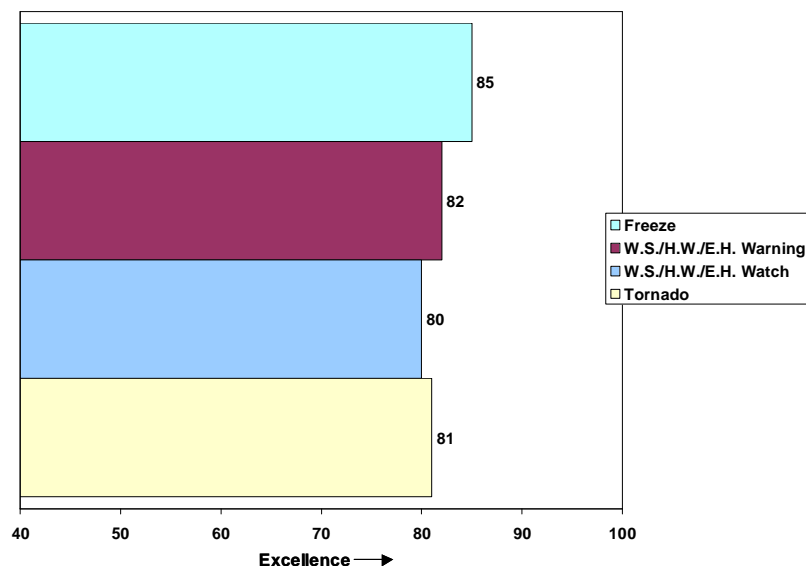
Research Summary continued

The next two charts compare a simple average of the attributes (understanding of information provided, amount of time to act, and accuracy of information) for Freeze Watches Or Warnings, Winter Storm, High Wind and Excessive Heat Watches and Warnings and Tornado Warnings for both the NWS Internal and Internet Panel data. All scores are very good. As can be seen, freeze information scores just a bit above the others in both cases. While freeze information scores higher on all three attributes, the higher score seems to be driven by the accuracy of the information, which is 5 to 9 points higher than the other hazardous weather products.

Average Combined Scores Hazardous Weather Information (NWS Internal)



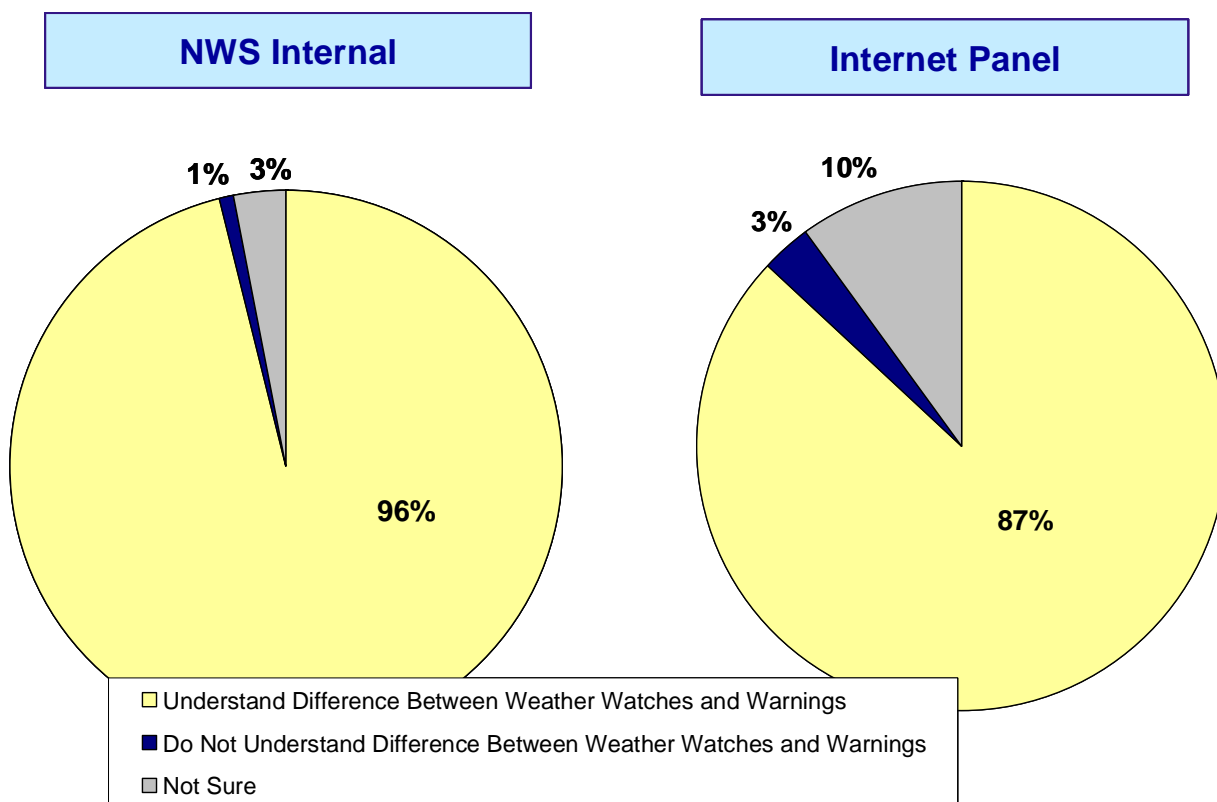
Average Combined Scores Hazardous Weather Information (Internet Panel)





Research Summary continued

Respondents were also asked a few questions to gauge their awareness and familiarity with the products and information the National Weather Service has available. The pie charts below illustrate the number of people surveyed who believe that they understand the difference between watches and warnings. As can be seen, the vast majority (96%) of the NWS Internal respondents indicate they know the difference. However, 13% of the Internal Panel respondents indicated that they either are not sure or do not understand the difference. This suggests that there is an education opportunity for NWS among the general users.

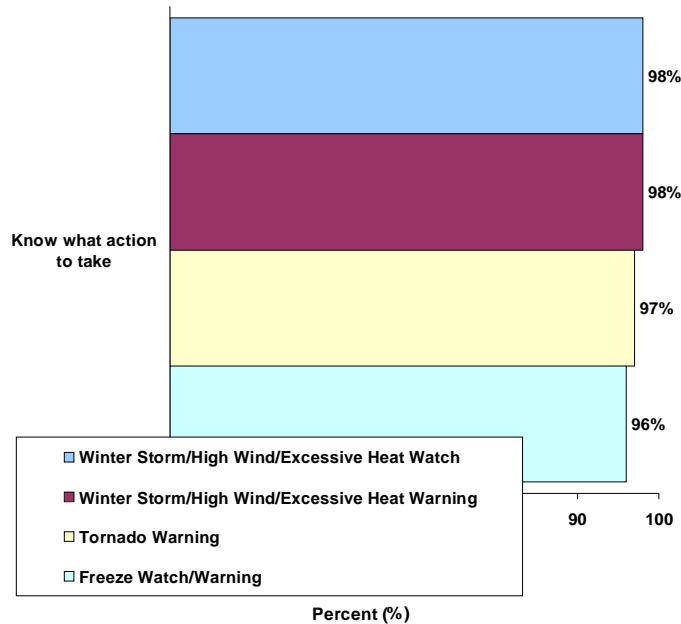




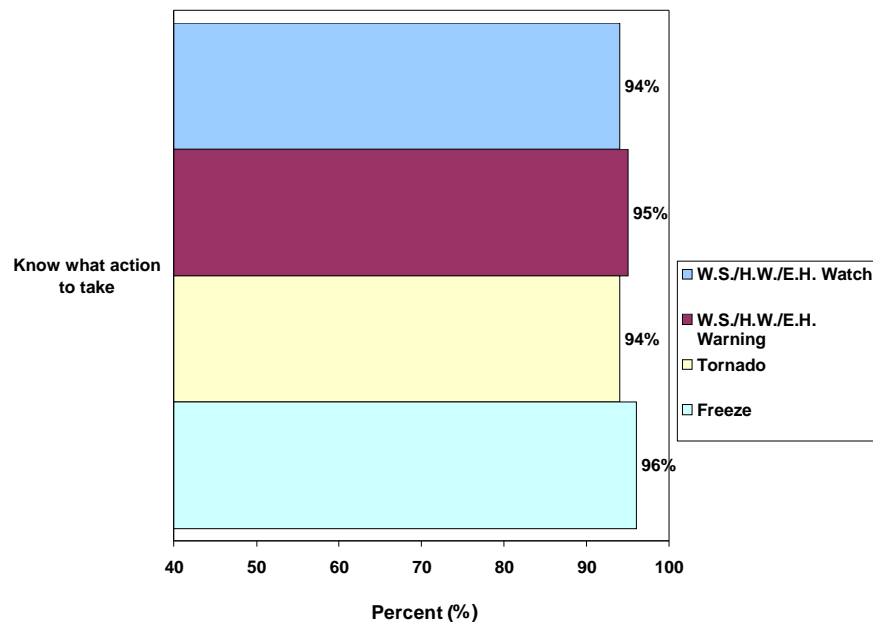
Research Summary continued

Further, respondents were asked whether they knew what action to take when Freeze Watches or Warnings, Winter Storm, High Wind and Excessive Heat Watches and Warnings and Tornado Warnings were issued. The next two charts clearly show that respondents did believe they knew what action to take.

Did You Know What Action to Take? (NWS Internal)



Did You Know What Action to Take? (Internet Panel)

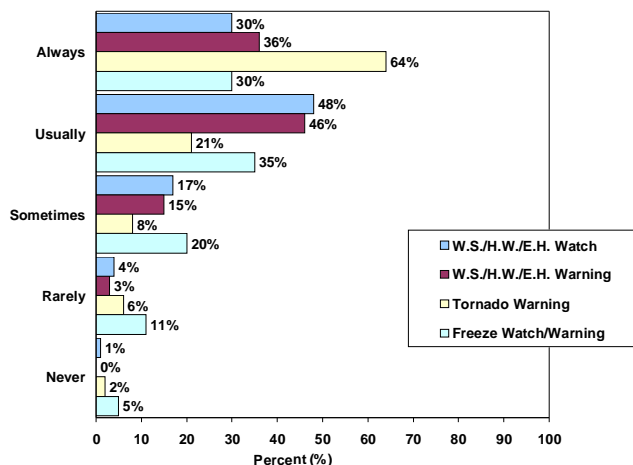




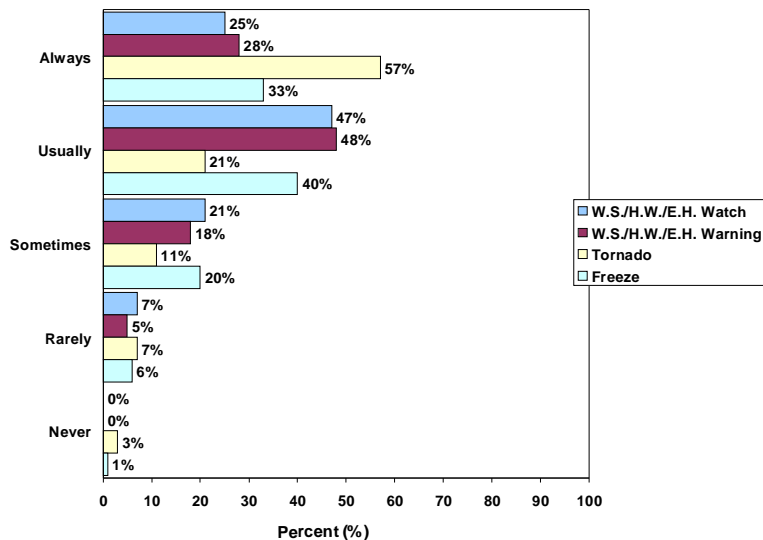
Research Summary continued

Respondents were also asked how often they take action based on Freeze Watches or Warnings, Winter Storm, High Wind and Excessive Heat Watches and Warnings and Tornado Warnings. As the next two charts show, the majority of both NWS Internal and Internet Panel respondents always or usually take action when one of the evaluated watches or warnings is issued by the NWS. Of particular note, a greater portion of both NWS Internal and Internet Panel respondents indicate they always take action when a tornado warning is issued as compared to any of the other evaluated watches or warnings. However, a small percentage of respondents (8% of the NWS Internal and 10% of the Internet Panel) indicated they rarely or never take action based on tornado warnings. The NWS may want to investigate the specific reasons why individuals would not want to take action in response to dangerous weather warnings, and consider expanding its efforts to communicate the risks associated with severe weather.

Frequency of action taken based on information provided (NWS Internal)



Frequency of action taken based on information provided (Internet Panel)



Due to rounding, some of the phenomena on this page do not precisely add to 100%

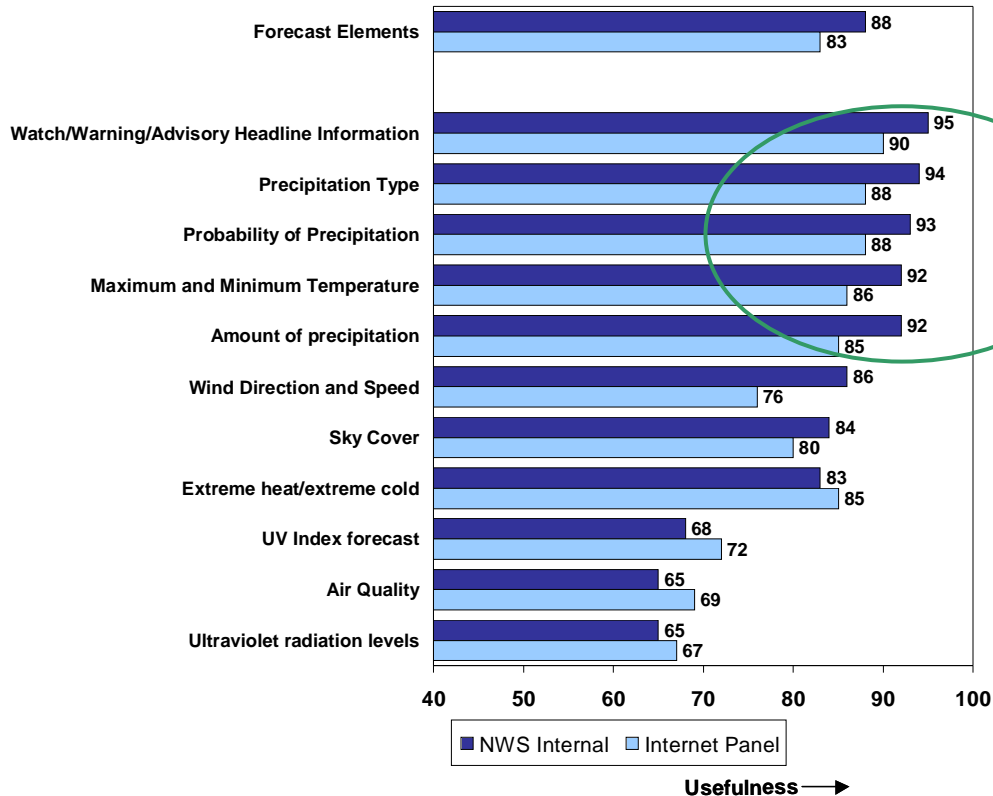


Research Summary continued

Forecast Elements

While the Forecast Elements component had a relatively lower impact for NWS Internal (0.6), the Internet Panel respondents found it just slightly more crucial (1.7) than Hazardous Weather Information (1.6). The graph below shows all of the attributes that were presented to both sets of respondents, asking each to rate their usefulness. Given that the Internet Panel respondents indicated that they primarily access weather information for recreational purposes, it would make sense that these items, including precipitation type, probability of precipitation, and maximum and minimum temperature are also very high impact for them. These forecast elements are also the highest scoring, with the NWS Internal respondents rating them in the 90s and the Internet Panel in the high 80s.

UV Index forecast, Air Quality and Ultraviolet radiation levels were rated relatively lower than the others. This does not necessarily mean that these items are not useful. It is entirely possible that individuals are simply less familiar with these elements. An opportunity for outreach education exists here as well.



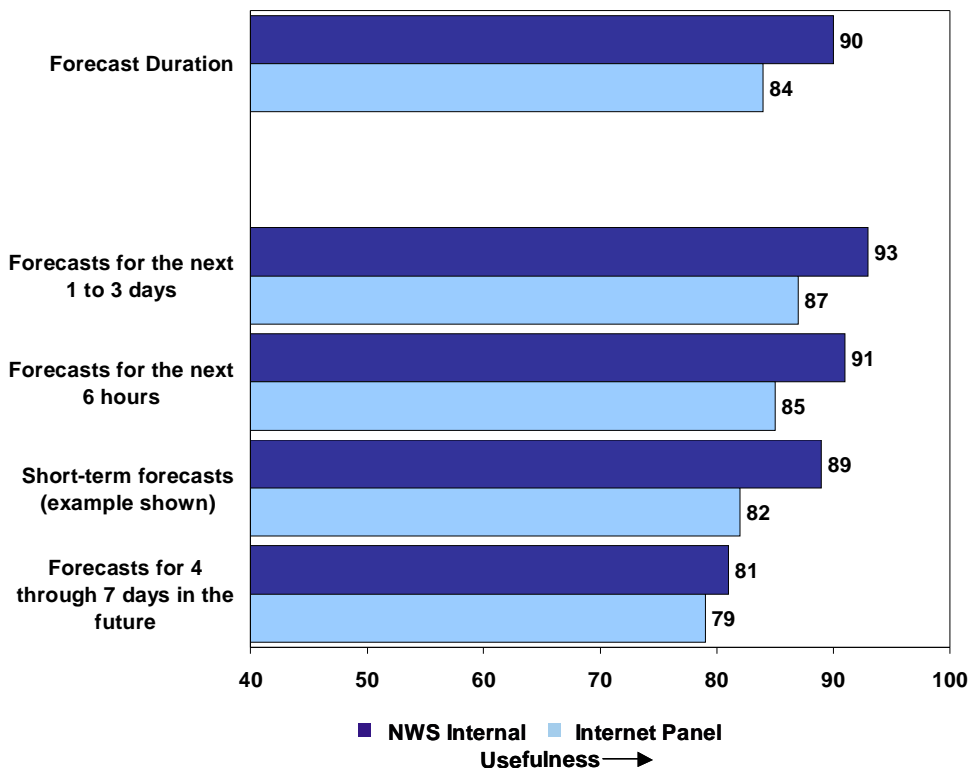


Research Summary continued

Forecast Duration

The Forecast Duration component asked respondents to rate the usefulness of forecasts for different time periods; forecasts for the next 1 to 3 days, 6 hours and 4 to 7 days in the future. Examples of such forecasts were not shown. The below chart shows scores for both NWS Internal and the Internet Panel respondents. All score very well, in the 80s-90s.

Respondents were also asked under a separate question to rate the usefulness of short-term forecasts and were shown an example of one. While the scores are slightly lower than those for “forecasts for the next 6 hours”, they are still very good (89 for NWS Internal and 82 for the Internet Panel). Respondents were asked if they had seen a short-term forecast before, and while 90% of the NWS Internal sample had, 54% of the Internet Panel had not. This suggests a lack of familiarity with the product among those who did not respond to the survey by way of NWS websites. This may or may not be a product that the NWS wants to promote usage among the general public. If so, the opportunity certainly exists.

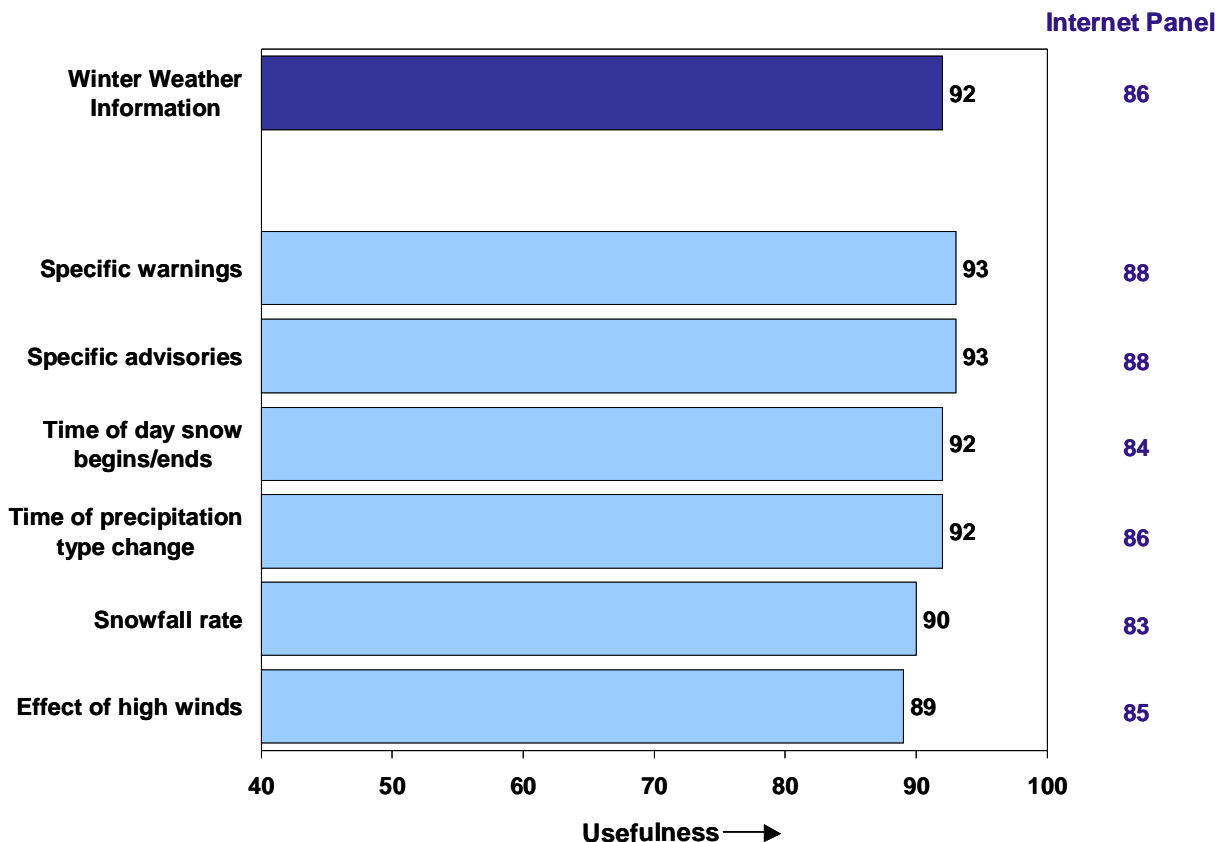




Research Summary continued

Winter Weather Information

Respondents rated the usefulness of Winter Weather Information extremely high. While an impact of 0.3 for both NWS Internal and the Internet Panel is comparatively low, this is not an indication that this information is not important to individuals. The graph below shows the scores for the NWS Internal data, and the results for the Internet Panel can be found to the right. As can be seen, the usefulness of Winter Weather Information scores very well across the board. Specific warnings and advisories score the highest (both 93 for NWS Internal and 88 for the Internet Panel) and are viewed as the most useful of all winter weather information. The NWS should interpret these extremely high scores as an indication that they are doing well in this area, and should maintain this information in their warning and forecast program.

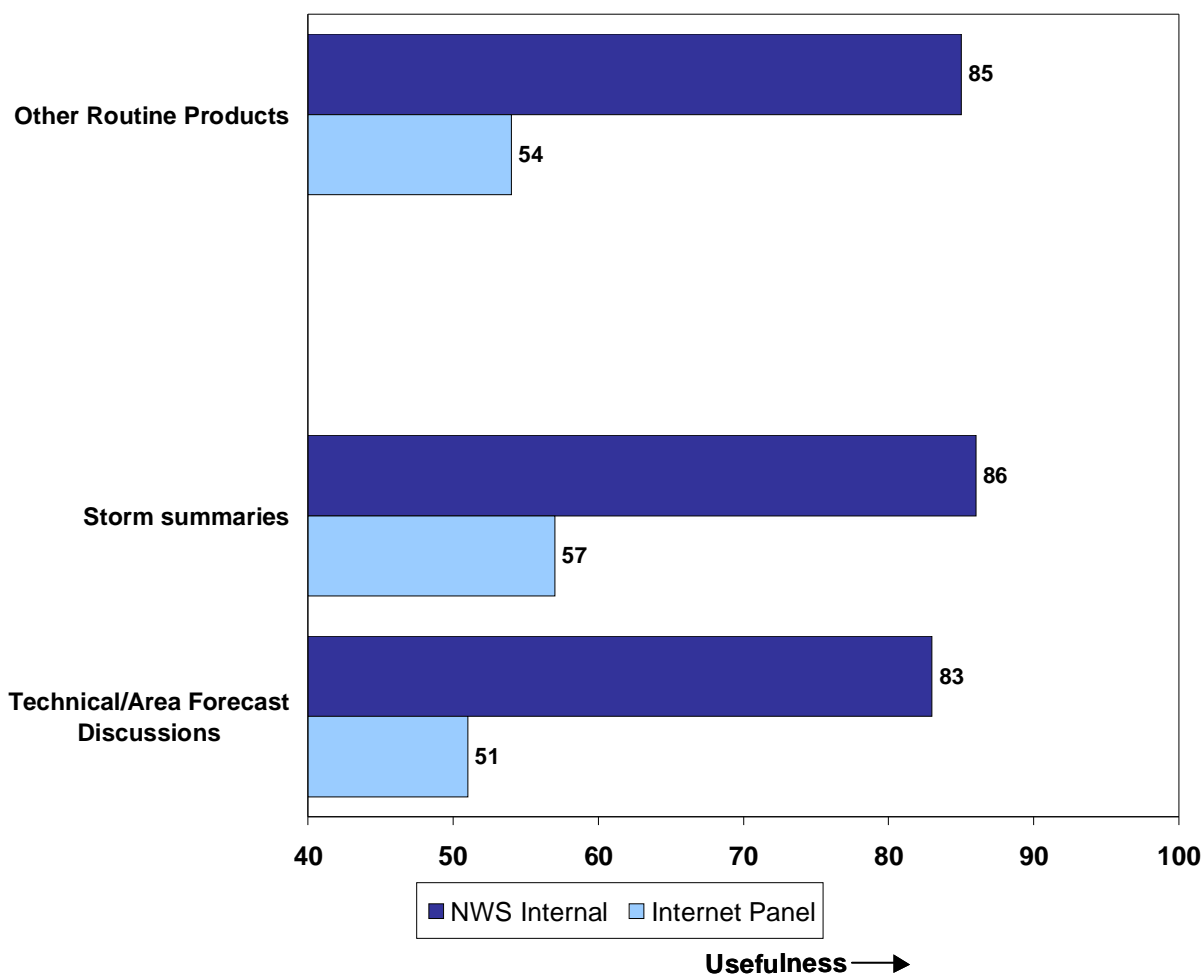




Research Summary continued

Other Routine Products

Respondents were asked to rate the usefulness of Storm Summaries and Technical/Area Forecast Discussions for the Other Routine Product component. While this is a low impact component; NWS Internal (0.1), Internet Panel (0.2), the huge disparity in scores between the two data sources, a 31-point differential, is interesting to note. When conducting both the Hydrology and Climate studies in 2004 for the National Weather Service, findings included the idea that different segments of users have different needs. Given that the Internet Panel respondents use weather information to decide what to wear or do in a given day, the Technical/Area Forecast Discussions may not be a product for this user group. One customer verbatim supports this idea: "The simple format is better ... you get weather oriented individuals who like the long, technical format, so both would be good, but [put] the easier stuff upfront". This is not to suggest that one product is better than the other, rather, one is more appropriate than another for different user groups.

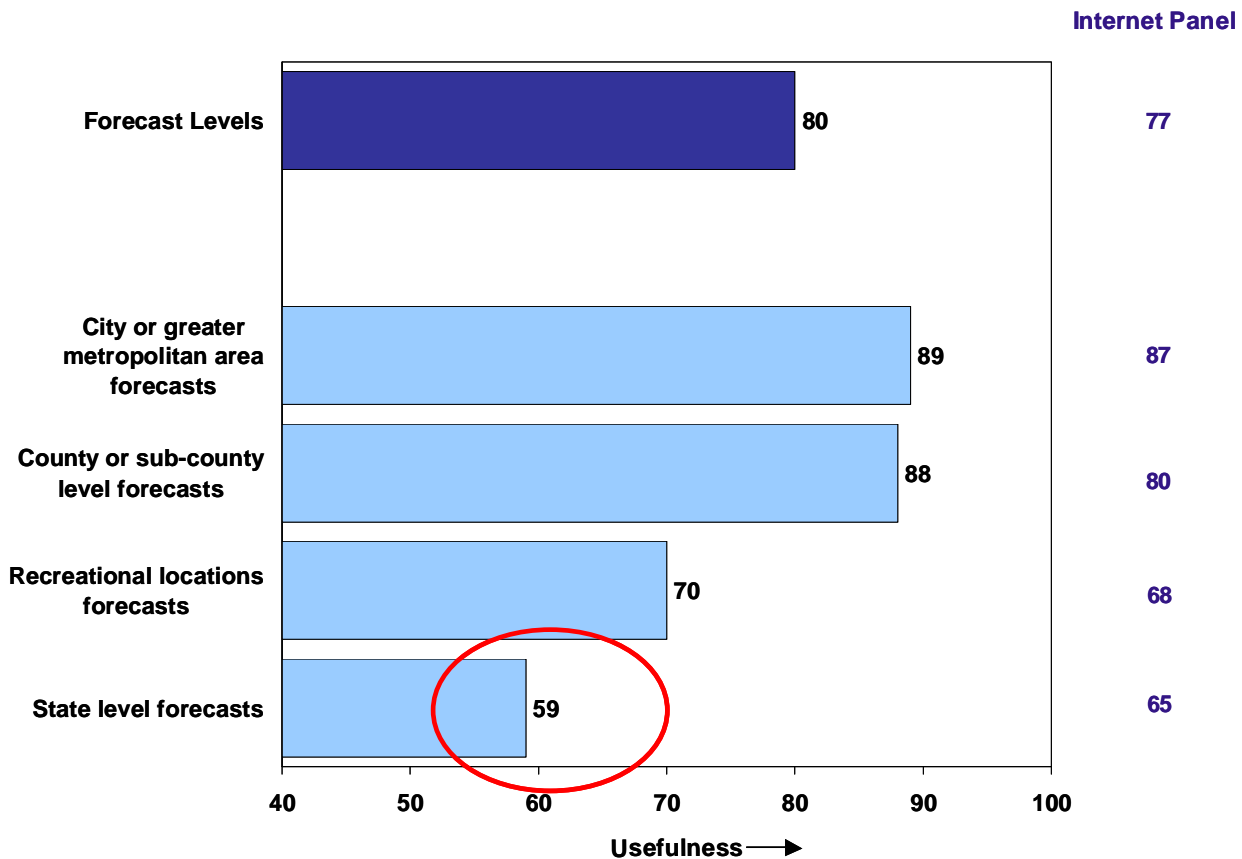




Research Summary continued

Forecast Levels

Finally, respondents rated different forecast areas, covering different geographic territories. Impacts were not reliable and were therefore not calculated. The chart below shows scores for both the NWS Internal and the Internet Panel respondents. Although the component is high scoring overall, State Level Forecasts fared the lowest (59 for NWS Internal and 65 for the Internet Panel). As the results indicate, the State Level Forecasts do not appear to be as useful to survey respondents as the others. While specific recommendations for change to this product were not a part of the research, this may be a point for further exploration.

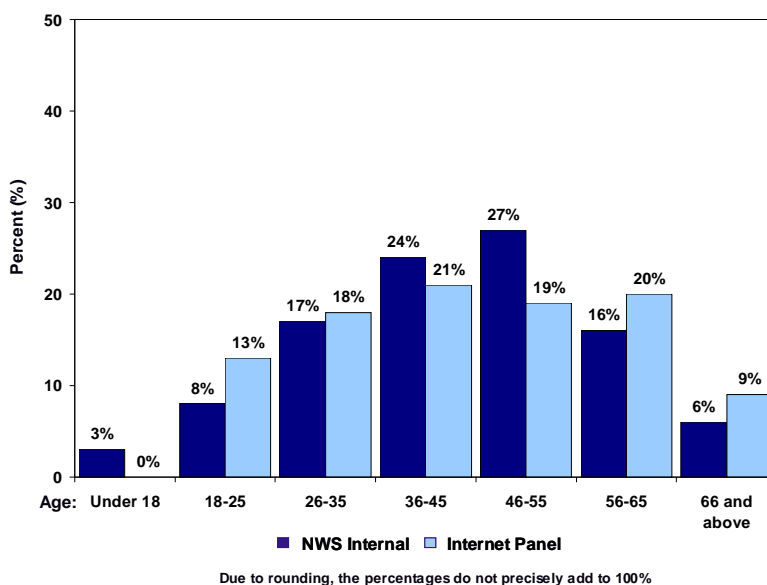




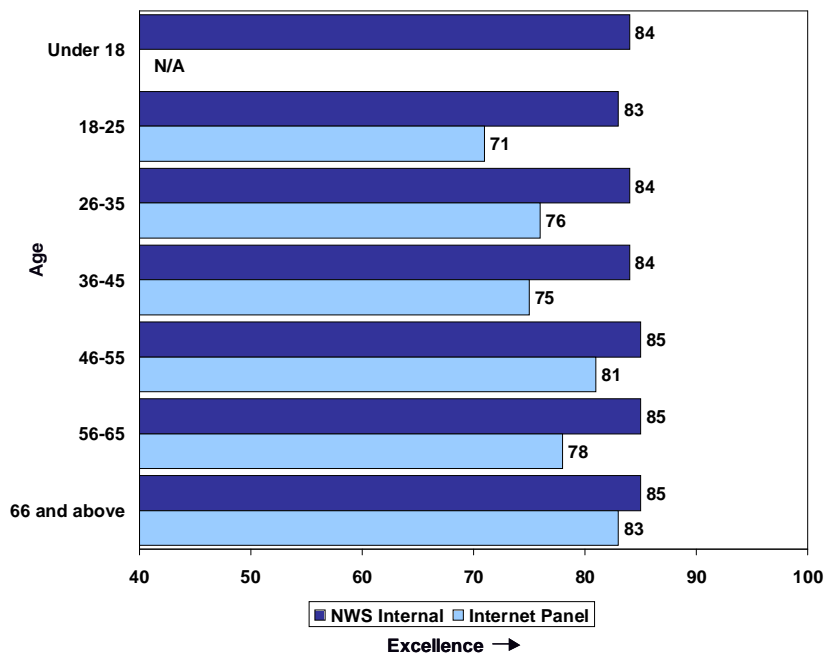
Research Summary continued

Segment Analysis

The chart below shows that the majority of respondents are older than 36, and that the Internet Panel skews slightly older than NWS Internal.



When looking at customer satisfaction scores for the age groups for the different panels, the NWS Internal respondents all rate the NWS comparably high. There is more of a disparity for the Internet Panel, scores ranging from 71 to 85. However, the sample sizes among the groups are relatively small and results should be considered with caution.

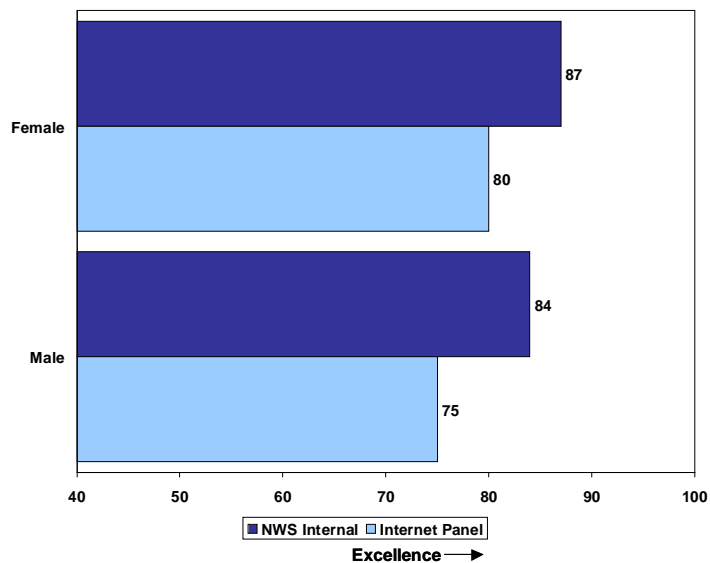




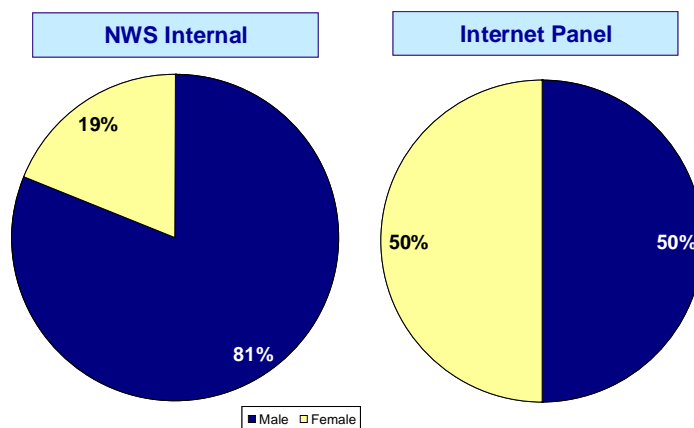
Research Summary continued

Customer satisfaction scores were also stratified by gender and are shown below. Women in both cases rated the NWS a bit higher. Females tend to give higher ratings within surveys of this nature. Again, based on 2000 US Census Figures, the Internet Panel was comprised of equal men and women; however, NWS Internal was 81% men and 19% women. While there are no general patterns for male and female response rates to surveys, this response division is still higher than that found when compared to another provider of similar information, which was in the low 60 percentile for male respondents. This comparatively high number of male respondents (81%) indicates that if it is the desire of the NWS to reach out to more females, then the opportunity exists. Given that the survey did not focus on gender related consumer behavior as it relates to weather, more research is necessary to determine how the NWS should go about reaching out to the female segment of the population.

Customer Satisfaction Scores by Gender



Respondents by Gender

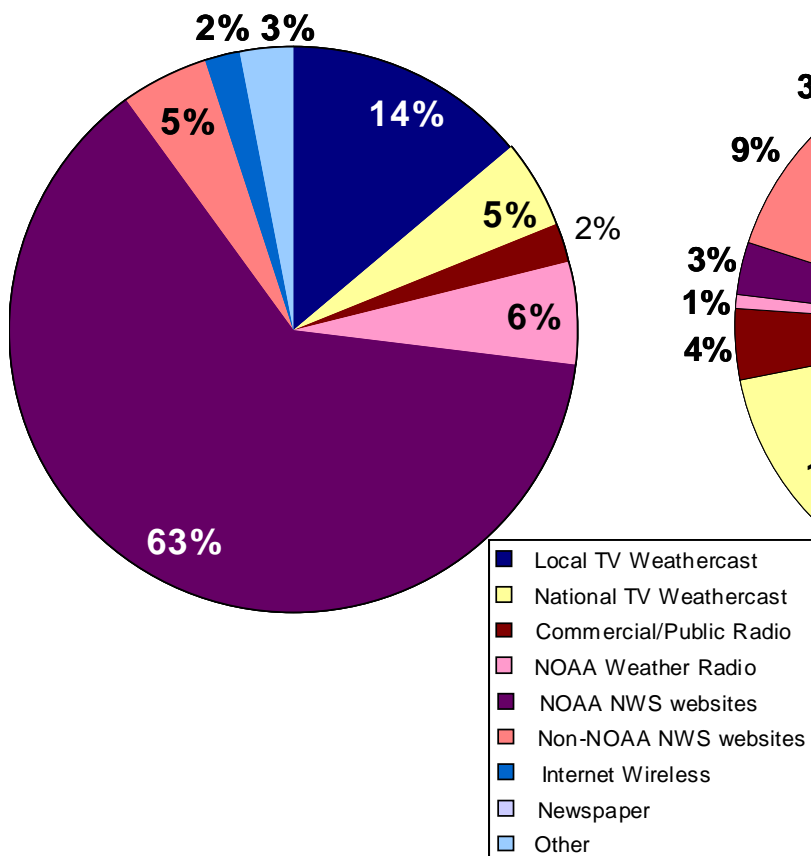




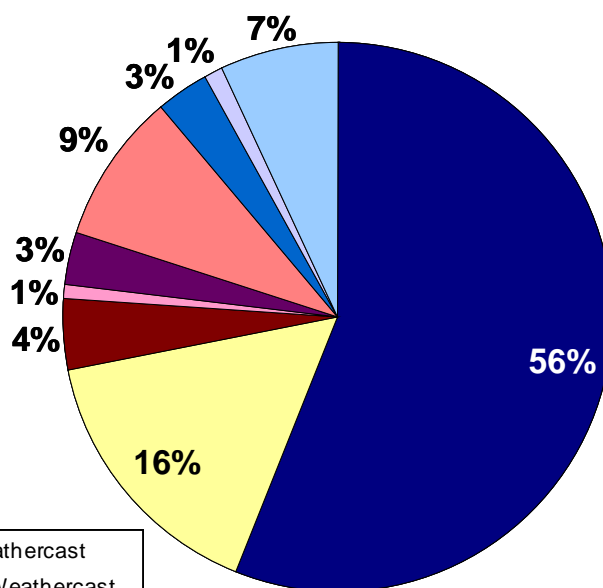
Research Summary continued

The pie charts below indicate the primary source of weather information for the two largest groups of respondents. The majority of the NWS Internal respondents obtain their weather information from NOAA NWS Websites (63%), while the majority of Internet Panel respondents receive their weather information from local and national television (72%). It is also interesting to note that a larger proportion of the Internet Panel goes to non-NOAA NWS (e.g., commercial, academic, etc.) web sites (9%) than NOAA NWS sites (3%). This highlights the critical nature of the partnership the NWS has with the private sector as a means to deliver information to the public.

NWS Internal



Internet Panel





Research Summary continued

Product Delivery / Format

Survey respondents were shown a static example of each product listed in the chart below and asked to rate their likelihood to use. As the chart shows, the Text Forecast and Text and Iconic Forecast were the highest scoring. As was seen in the Hydrology and Climate studies in 2004, the simpler the graphics, the more appeal they held to a wider group of people. The more complex in nature (e.g., Tabular Only Forecast), the lower the scores overall. Again, this is not to suggest that these are not useful products. There may be a lack of awareness: 1) that they exist, and 2) of their interactive functionality. If wider usage is desired, it is suggested that more resources be put into making these products easier for a wider audience to understand.

Scale: 0=Not at all Likely, 100=Very Likely	NWS Internal	Internet Panel
Likelihood to use Text Forecast	89	82
Likelihood to use Text and Iconic Forecast	85	83
Likelihood to use an All Hazards NOAA Weather Radio	82	67
Likelihood to use Graphics and Text Forecast	78	66
Likelihood to use Graphics Only Forecast	69	65
Likelihood to use Experimental Graphical 3-Hourly Forecast	67	55
Likelihood to use Graphical (Element Meteorogram) Forecast	65	36
Likelihood to use Tabular Only Forecast	50	36
Sample Size	10,062	462

Listings of all other scores can be found beginning on page 37.



Research Summary continued

Conclusions & Recommendations

The National Weather Service delivers weather information exceptionally well in the eyes of the public. Both a customer satisfaction score of 84 for the NWS Internal and 77 for the Internet Panel are very strong scores. The National Weather Service has a very solid base from which to continue building.

Recommendations

As one customer verbatim described, “The NWS is my ‘gold standard’ for weather information.” Given the high marks the NWS has received, the key is to continue this level of service that customers have come to expect.

As was recommended with Hydrology, it is important to note that a “one size fits all” approach may not be best with products, as some customers need more in-depth information than others. NWS needs to understand the requirements of its key constituents as it makes improvements in products and services.

Following are target areas for continued improvement:

Communication/Education

Both communication and education with the general public continues to be critical. Although people know what actions they should take during hazardous weather, and the majority do take some form of action, there are still some who do not and further research may be pursued to determine why. While the National Weather Service certainly cannot force individuals to act on its warnings, it can continue to be as vigilant as possible about communicating risks taken if warnings are ignored.

Audience Awareness

The findings of this General Public survey suggest that the National Weather Service has two different audiences: 1) general public, and 2) the members of the public who actively use NWS Products (e.g., emergency managers, aviators, boaters, etc.). Among the general public, precipitation and temperature information is as critical as hazardous weather information, as it affects daily life and is used to determine what to wear and do that day. However, for active NWS users (those who responded via the web link), hazardous weather information is the overwhelming driver of satisfaction as they use information for safety or job related decisions. The key is to understand these distinct needs, and continue to cater to both using the products and channels (direct vs. partners) that are most effective.



Research Summary continued

Targeting User Groups

As was found with Hydrology and Climate, members of the general public have different needs. The National Weather Service must ask the critical question, are products meeting the needs of those for whom the products are being designed? As was recommended to both Hydrology and Climate, the National Weather Service might consider identifying key user needs/segments, and then providing the information in the most user-friendly way possible for each group.

Additional Findings

Additional noteworthy items not already covered within the report include the following.

Respondents were asked if severe thunderstorm wind/hail criteria should change. Approximately two-thirds of NWS Internal and Internet Panel respondents indicated they did not want to make a change to severe thunderstorm wind and hail criteria. In fact, more people (25%-30%) would want the criteria reduced than would want it increased (2-5%).

Additionally, respondents were also asked to rate the usefulness of additional UV Index forecasts. Usefulness of an alert when UV conditions are unusually high (75 - NWS Internal and 79 - Internet Panel) rated higher than UV forecasts for days beyond tomorrow (56 - NWS Internal and 60 - Internet Panel) and UV forecasts for other times of the day besides noon (60 - NWS Internal and 67 - Internet Panel).

Lastly, if NOAA/EPAAir Quality Index Forecasts were made available for any hour of the day and exceeded critical values impacting health, the majority of respondents indicated they would either change commuting methods, adjust outdoor activities, or both (62% - NWS Internal and 71% - Internet Panel).



Score Detail



Score & Impact Summary - All Customers

	NWS Internal		USAToday		Internet Panel	
	Score	Impact	Score	Impact	Score	Impact
Hazardous Weather Information	85	2.7	84	2.6	81	1.6
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	76		72		75	
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	87		86		82	
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	89		89		83	
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77		73		78	
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	87		86		83	
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	89		90		85	
Tornado Warning - Accuracy of the information	80		77		79	
Tornado Warning - Amount of time to act	77		83		78	
Tornado Warning - Expectations based on information provided	89		90		85	
Freeze Watch or Warning - Accuracy of the information	85		82		83	
Freeze Watch or Warning - Amount of time to act	89		91		86	
Freeze Watch or Warning - Expectations based on information provided	92		92		87	
Forecast Levels	80	--	79	--	77	--
State level forecasts	59		66		65	
County or sub-county level forecasts	88		85		80	
City or greater metropolitan area forecasts	89		86		87	
Recreational locations forecasts	70		67		68	
Forecast Elements	88	0.6	87	0.7	83	1.7
Maximum and Minimum Temperature	92		93		86	
Probability of Precipitation	93		88		88	
Precipitation Type	94		91		88	
Air Quality	65		68		69	
Amount of precipitation	92		92		85	
Sky Cover	84		85		80	
Wind Direction and Speed	86		84		76	
Ultraviolet radiation levels	65		69		67	
UV Index forecast	68		77		72	
Watch/Warning/Advisory Headline Information	95		94		90	
Extreme heat/extreme cold	83		85		85	
Forecast Duration	90	0.7	86	0.7	84	1.0
Forecasts for the next 6 hours	91		90		85	
Forecasts for the next 1 to 3 days	93		89		87	
Forecasts for 4 through 7 days in the future	81		74		79	
Short-term forecasts are useful	89		86		82	
Other Routine Products	85	0.1	76	0.2	54	0.2
Storm summaries	86		78		57	
Technical/Area Forecast Discussions	83		74		51	
Winter Weather Information	92	0.3	91	0.3	86	0.3
Snowfall rate	90		88		83	
Time of day snow begins/ends	92		90		84	
Specific warnings	93		95		88	
Specific advisories	93		94		88	
Time of precipitation type change	92		91		86	
Effect of high winds	89		89		85	
Satisfaction	84	--	77	--	77	--
Overall Satisfaction with NWS Products and Services	89		84		81	
How well NWS Products and Services meet expectations	80		72		73	
How NWS compares to an 'ideal' weather products and services organization	82		73		77	
Likelihood to Take Action	91	2.4	88	2.5	81	3.4
Likelihood to take action based on weather information you receive from NWS	91		88		81	
Confidence in NWS	89	3.7	83	3.8	83	3.9
Confidence that NWS will do a good job of providing weather products and services	89		83		83	
Additional Non-modeled Questions						
Likelihood to use an All Hazards NOAA Weather Radio	82		79		67	
Likelihood to use IMS/GIS products available on the internet	89		82		76	
Likelihood to use Text Forecast	89		82		82	
Likelihood to use Graphical (Element Meteorogram) Forecast	65		58		36	
Likelihood to use Experimental Graphical 3-Hourly Forecast	67		71		55	
Likelihood to use Tabular Only Forecast	50		51		36	
Likelihood to use Graphics Only Forecast	69		71		65	
Likelihood to use Text and Iconic Forecast	85		85		83	
Likelihood to use Graphics and Text Forecast	78		75		66	
Short-term forecasts would be useful	77		77		67	
UV forecasts for days beyond tomorrow	56		59		60	
UV forecasts for other times of the day besides noon	60		64		67	
Alert when UV conditions are unusually high	75		86		79	
Accessibility of NWS personnel to your problem	78		68		76	
Responsiveness of NWS personnel to your problem	73		63		77	
Sample Size	10,062		74		462	



Non-Scaled Responses - All Customers

	NWS Internal	USAToday	Internet Panel
Sample Size	10,062	74	462
Age			
Under 18	3%	1%	0%
18-25	8%	5%	13%
26-35	17%	15%	18%
36-45	24%	15%	21%
46-55	27%	36%	19%
56-65	16%	18%	20%
66 and above	6%	9%	9%
Gender			
Male	81%	78%	50%
Female	19%	22%	50%
Use weather information for:*			
Dress for the day	67%	82%	88%
Vacation, travel, or social activity planning	70%	72%	71%
Personal safety and protection of property	73%	69%	54%
Educational purposes	37%	30%	11%
Job or business activities	46%	42%	23%
Exterior home or yard work	51%	47%	56%
Transportation decisions for work, school, recreation, etc.	66%	64%	66%
Primary reason for accessing weather information			
Dress for the day	15%	27%	42%
Vacation, travel, or social activity planning	11%	14%	12%
Personal safety and protection of property	23%	22%	9%
Educational purposes	11%	5%	1%
Job or business activities	19%	18%	6%
Exterior home or yard work	3%	1%	4%
Transportation decisions for work, school, recreation, etc.	18%	14%	26%
Obtained weather-related safety or educational materials			
Yes	58%	69%	39%
No	42%	31%	61%
Where obtain weather-related safety or educational materials:*			
Internet	52%	64%	36%
Libraries	9%	9%	3%
Local Community Events	7%	1%	3%
Schools	5%	5%	3%
Governmental Outreach Activities	9%	9%	2%
Newspaper	14%	22%	14%
NWS Office	21%	14%	2%
Other	10%	12%	5%
Preferred format for weather-related materials			
Web pages	79%	78%	69%
Newspaper	2%	2%	13%
Books and guides	7%	2%	2%
Brochures and pamphlets	5%	8%	4%
Promotional materials	1%	0%	2%
Exhibits & displays	1%	0%	1%
CD/DVD/VHS-tapes	4%	6%	1%
Other	3%	4%	8%
Own an All Hazards NOAA Weather Radio			
Yes	53%	34%	17%
No	47%	66%	83%
Where typically obtain weather information:*			
Local TV Weathercast	68%	84%	90%
National TV Weathercast	47%	46%	60%
Commercial or Public Radio	35%	51%	38%
All Hazards NOAA Weather Radio	36%	27%	8%
NOAA NWS Websites	90%	54%	13%
Non-NOAA NWS Websites	36%	46%	22%
Internet Wireless	9%	20%	13%
Newspaper	0%	0%	28%
Other	0%	0%	15%



Non-Scaled Responses - All Customers continued

	NWS Internal	USAToday	Internet Panel
Sample Size	10,062	74	462
Primary source for weather information			
Local TV Weathercast	14%	36%	56%
National TV Weathercast	5%	12%	16%
Commercial or Public Radio	2%	4%	4%
NOAA Weather Radio	6%	7%	1%
NOAA NWS websites	63%	25%	3%
Non-NOAA NWS websites	5%	10%	9%
Internet Wireless	2%	1%	3%
Newspaper	0%	0%	1%
Other	3%	5%	7%
Use high-speed internet access			
Yes	75%	80%	80%
No	24%	20%	20%
Not sure	1%	0%	0%
Understand difference between weather watches and warnings			
Yes	96%	95%	87%
No	1%	1%	3%
Not sure	3%	4%	10%
Past 2 years seen or heard winter storm, high wind or excessive heat watch			
Yes	98%	100%	96%
No	1%	0%	2%
Don't know	1%	0%	1%
Know what action to take after winter storm, high wind or excessive heat watch			
Yes	98%	97%	94%
No	1%	0%	2%
Not sure	1%	3%	4%
Frequency of action taken based on a winter storm, high wind or excessive heat watch			
Always	30%	30%	25%
Usually	48%	47%	47%
Sometimes	17%	20%	21%
Rarely	4%	1%	7%
Never	1%	1%	0%
Past 2 years seen or heard winter storm, high wind or excessive heat warning			
Yes	98%	99%	94%
No	2%	1%	6%
Know what action to take after winter storm, high wind or excessive heat warning			
Yes	98%	99%	95%
No	1%	1%	2%
Not sure	1%	0%	3%
Frequency of action taken based on a winter storm, high wind or excessive heat warning			
Always	36%	35%	28%
Usually	46%	51%	48%
Sometimes	15%	13%	18%
Rarely	3%	1%	5%
Never	0%	0%	0%
Past 2 years seen or heard tornado warning			
Yes	59%	73%	56%
No	38%	23%	40%
Not sure	3%	4%	4%
Know what action to take after tornado warning			
Yes	97%	98%	94%
No	2%	0%	2%
Not sure	2%	2%	3%
Frequency of action taken based on tornado warnings			
Always	64%	56%	57%
Usually	21%	31%	21%
Sometimes	8%	6%	11%
Rarely	6%	2%	7%
Never	2%	6%	3%
Wind criterion			
Kept at 58 mph	69%	70%	72%
Lower than 58	28%	27%	26%
Higher than 58	3%	3%	2%
Hail criterion			
Kept at 3/4 inch	65%	68%	72%
Smaller than 3/4 inch	30%	31%	25%
Increased to 1 inch	5%	1%	3%



Non-Scaled Responses - All Customers continued

	NWS Internal	USAToday	Internet Panel
Sample Size	10,062	74	462
Past 2 years seen or heard freeze watch or warning			
Yes	79%	85%	66%
No	15%	8%	24%
Not sure	7%	7%	9%
Know what action to take after freeze watch or warning			
Yes	96%	93%	96%
No	2%	3%	2%
Not sure	2%	3%	2%
Frequency of action taken based on freeze watches or warnings			
Always	30%	32%	33%
Usually	35%	27%	40%
Sometimes	20%	21%	20%
Rarely	11%	15%	6%
Never	5%	5%	1%
Understand difference between weather warnings and advisories			
Yes	94%	97%	89%
No	2%	1%	3%
Not sure	3%	1%	8%
Frequency of action taken based on weather advisories			
Always	17%	16%	15%
Usually	39%	45%	41%
Sometimes	33%	22%	35%
Rarely	9%	12%	8%
Never	2%	5%	1%
Prefer to receive longer range forecast information			
Single value	9%	16%	16%
Range of values	60%	50%	53%
Probabilistic values	31%	34%	30%
Have you ever seen or heard a short-term forecast			
Yes	90%	80%	46%
No	10%	20%	54%
NOAA/EPA Air Quality Index Forecast capability			
Change your commuting method	1%	0%	1%
Adjust your outdoor activities	42%	39%	46%
Both of the above	19%	24%	24%
Do nothing different	39%	36%	30%
Seen or heard UV Index forecast for your area			
Yes	56%	61%	40%
No	44%	39%	60%
Live in an area which experiences winter storms			
Yes	85%	92%	79%
No	15%	8%	21%
Winter weather scenario: best way to communicate to public			
Single Winter Storm Warning	20%	25%	30%
Three separate warnings	70%	69%	56%
No difference	10%	6%	14%
Contacted NWS to report a problem or make a suggestion			
Yes	29%	19%	3%
No	71%	81%	97%



National Oceanic and Atmospheric Administration
National Weather Service
General Public Customer Satisfaction

Segmentation



Score Summaries - NWS Internal by Gender

	Male	Female
Hazardous Weather Information	84	87
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	75	79
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	86	88
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	89	90
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77	80
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	86	89
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	89	90
Tornado Warning - Accuracy of the information	79	83
Tornado Warning - Amount of time to act	76	79
Tornado Warning - Expectations based on information provided	89	90
Freeze Watch or Warning - Accuracy of the information	84	87
Freeze Watch or Warning - Amount of time to act	88	90
Freeze Watch or Warning - Expectations based on information provided	92	93
Forecast Levels	79	81
State level forecasts	58	62
County or sub-county level forecasts	87	88
City or greater metropolitan area forecasts	88	91
Recreational locations forecasts	70	70
Forecast Elements	87	90
Maximum and Minimum Temperature	92	92
Probability of Precipitation	93	95
Precipitation Type	93	95
Air Quality	64	71
Amount of precipitation	91	93
Sky Cover	83	86
Wind Direction and Speed	86	86
Ultraviolet radiation levels	64	71
UV Index forecast	67	75
Watch/Warning/Advisory Headline Information	95	97
Extreme heat/extreme cold	83	87
Forecast Duration	89	92
Forecasts for the next 6 hours	91	93
Forecasts for the next 1 to 3 days	93	95
Forecasts for 4 through 7 days in the future	80	84
Short-term forecasts are useful	88	92
Other Routine Products	85	85
Storm summaries	86	88
Technical/Area Forecast Discussions	84	81
Winter Weather Information	91	94
Snowfall rate	90	92
Time of day snow begins/ends	91	93
Specific warnings	93	96
Specific advisories	92	95
Time of precipitation type change	91	94
Effect of high winds	89	92
Satisfaction	84	87
Overall Satisfaction with NWS Products and Services	89	91
How well NWS Products and Services meet expectations	79	82
How NWS compares to an 'ideal' weather products and services organization	82	85
Likelihood to Take Action	91	93
Likelihood to take action based on weather information you receive from NWS	91	93
Confidence in NWS	88	91
Confidence that NWS will do a good job of providing weather products and services	88	91
Likelihood to use an All Hazards NOAA Weather Radio	82	83
Likelihood to use IMS/GIS products available on the internet	89	88
Likelihood to use Text Forecast	88	90
Likelihood to use Graphical (Element Meteorogram) Forecast	67	55
Likelihood to use Experimental Graphical 3-Hourly Forecast	68	67
Likelihood to use Tabular Only Forecast	51	43
Likelihood to use Graphics Only Forecast	70	64
Likelihood to use Text and Iconic Forecast	84	88
Likelihood to use Graphics and Text Forecast	78	79
Short-term forecasts would be useful	76	80
UV forecasts for days beyond tomorrow	55	59
UV forecasts for other times of the day besides noon	59	67
Alert when UV conditions are unusually high	74	83
Accessibility of NWS personnel to your problem	78	79
Responsiveness of NWS personnel to your problem	73	75
Sample Size	8,086	1,930



Score Summaries - NWS Internal by Age

	Under 18	18-25	26-35	36-45	46-55	56-65	66 and above
Hazardous Weather Information	84	85	84	84	85	85	85
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	70	75	74	75	77	78	78
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	87	87	86	86	87	87	87
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	87	89	87	88	90	90	89
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77	77	76	77	77	79	79
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	85	86	85	86	87	87	88
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	89	90	88	88	90	90	89
Tornado Warning - Accuracy of the information	82	81	80	80	80	78	78
Tornado Warning - Amount of time to act	73	77	76	77	77	78	79
Tornado Warning - Expectations based on information provided	90	90	88	89	89	90	88
Freeze Watch or Warning - Accuracy of the information	87	88	85	84	84	84	84
Freeze Watch or Warning - Amount of time to act	89	89	89	88	88	89	91
Freeze Watch or Warning - Expectations based on information provided	92	92	91	91	92	92	93
Forecast Levels	80	80	80	80	80	80	78
State level forecasts	55	56	55	58	61	61	63
County or sub-county level forecasts	86	88	87	87	88	89	88
City or greater metropolitan area forecasts	90	89	90	89	88	88	88
Recreational locations forecasts	76	72	71	71	70	69	63
Forecast Elements	87	89	87	87	88	87	88
Maximum and Minimum Temperature	92	94	92	91	93	92	92
Probability of Precipitation	91	93	93	93	94	93	94
Precipitation Type	94	95	94	93	94	93	93
Air Quality	69	66	64	65	65	64	67
Amount of precipitation	91	91	91	91	93	92	93
Sky Cover	82	84	83	83	84	84	84
Wind Direction and Speed	84	85	84	86	88	88	88
Ultraviolet radiation levels	71	68	65	66	66	64	63
UV Index forecast	75	73	68	68	68	66	64
Watch/Warning/Advisory Headline Information	96	96	95	95	95	94	95
Extreme heat/extreme cold	86	84	83	83	83	83	84
Forecast Duration	89	90	89	89	90	89	88
Forecasts for the next 6 hours	92	93	91	90	91	91	90
Forecasts for the next 1 to 3 days	91	93	93	93	94	93	92
Forecasts for 4 through 7 days in the future	83	81	80	80	82	81	80
Short-term forecasts are useful	88	90	88	88	90	89	89
Other Routine Products	87	88	86	86	85	83	80
Storm summaries	89	89	87	87	86	85	82
Technical/Area Forecast Discussions	85	87	85	84	83	81	76
Winter Weather Information	92	92	92	92	92	91	90
Snowfall rate	92	91	91	90	90	88	88
Time of day snow begins/ends	92	93	93	92	92	89	89
Specific warnings	94	94	93	94	94	92	92
Specific advisories	92	93	92	93	94	92	92
Time of precipitation type change	92	92	93	92	92	91	90
Effect of high winds	88	88	88	89	90	90	90
Satisfaction	84	83	84	84	85	85	85
Overall Satisfaction with NWS Products and Services	88	87	88	89	89	90	90
How well NWS Products and Services meet expectations	79	77	79	80	80	80	80
How NWS compares to an 'ideal' weather products and services organization	83	81	81	82	83	83	84
Likelihood to Take Action	87	88	90	91	92	92	93
Likelihood to take action based on weather information you receive from NWS	87	88	90	91	92	92	93
Confidence in NWS	89	88	89	89	89	88	89
Confidence that NWS will do a good job of providing weather products and services	89	88	89	89	89	88	89
Likelihood to use an All Hazards NOAA Weather Radio	86	88	84	84	81	80	76
Likelihood to use IMS/GIS products available on the internet	87	91	89	90	89	88	86
Likelihood to use Text Forecast	88	87	88	88	90	90	90
Likelihood to use Graphical (Element Meteorogram) Forecast	69	67	65	65	65	64	63
Likelihood to use Experimental Graphical 3-Hourly Forecast	77	69	67	67	67	66	65
Likelihood to use Tabular Only Forecast	61	54	49	50	49	47	46
Likelihood to use Graphics Only Forecast	78	74	69	67	69	68	68
Likelihood to use Text and Iconic Forecast	91	87	85	84	85	85	85
Likelihood to use Graphics and Text Forecast	85	81	81	79	78	75	72
Short-term forecasts would be useful	74	74	76	76	79	76	77
UV forecasts for days beyond tomorrow	70	63	57	57	55	52	50
UV forecasts for other times of the day besides noon	76	70	64	61	59	55	51
Alert when UV conditions are unusually high	86	81	75	76	74	73	71
Accessibility of NWS personnel to your problem	65	83	77	78	79	75	78
Responsiveness of NWS personnel to your problem	68	76	72	73	75	70	75
Sample Size	255	780	1,676	2,398	2,743	1,618	578



Score Summaries - NWS Internal by Region

	Central Region	Eastern Region	Southern Region	Western Region	Alaska Region	Pacific Region	International
Hazardous Weather Information	85	85	86	83	79	84	85
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	76	75	78	76	71	75	79
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	88	87	88	84	81	86	83
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	90	89	90	87	87	89	91
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	78	77	80	77	71	76	88
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	87	87	88	85	81	86	92
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	90	90	90	87	87	89	94
Tornado Warning - Accuracy of the information	81	78	81	76	--	81	70
Tornado Warning - Amount of time to act	80	74	78	71	--	62	62
Tornado Warning - Expectations based on information provided	91	87	90	82	--	79	78
Freeze Watch or Warning - Accuracy of the information	85	86	85	83	82	94	91
Freeze Watch or Warning - Amount of time to act	89	89	90	86	84	89	89
Freeze Watch or Warning - Expectations based on information provided	92	92	93	90	91	94	92
Forecast Levels	80	79	82	79	75	79	76
State level forecasts	61	58	62	55	50	69	56
County or sub-county level forecasts	89	89	89	86	76	82	76
City or greater metropolitan area forecasts	88	88	90	89	90	87	87
Recreational locations forecasts	69	67	72	74	72	69	73
Forecast Elements	88	88	89	87	85	84	91
Maximum and Minimum Temperature	92	92	93	93	92	84	90
Probability of Precipitation	93	93	95	94	90	89	94
Precipitation Type	95	96	93	91	93	71	93
Air Quality	63	66	67	67	56	69	81
Amount of precipitation	92	94	90	92	89	91	93
Sky Cover	84	83	84	83	83	85	90
Wind Direction and Speed	87	84	88	87	89	91	90
Ultraviolet radiation levels	65	66	68	65	47	73	80
UV Index forecast	67	69	71	67	54	69	71
Watch/Warning/Advisory Headline Information	96	95	96	93	92	97	96
Extreme heat/extreme cold	85	84	85	81	76	73	94
Forecast Duration	90	89	90	90	87	90	87
Forecasts for the next 6 hours	92	92	91	89	90	92	90
Forecasts for the next 1 to 3 days	93	93	94	94	93	92	91
Forecasts for 4 through 7 days in the future	80	80	83	85	73	79	81
Short-term forecasts are useful	90	89	89	88	86	90	92
Other Routine Products	85	86	86	85	83	84	82
Storm summaries	86	87	86	86	83	83	84
Technical/Area Forecast Discussions	83	83	85	83	82	85	80
Winter Weather Information	93	94	90	87	91	42	95
Snowfall rate	92	93	87	85	90	31	93
Time of day snow begins/ends	93	95	89	85	88	33	94
Specific warnings	94	95	93	89	94	41	96
Specific advisories	94	94	93	89	93	40	96
Time of precipitation type change	93	94	91	88	88	31	96
Effect of high winds	91	90	87	87	88	44	96
Satisfaction	85	84	86	83	81	81	86
Overall Satisfaction with NWS Products and Services	89	89	91	88	87	86	91
How well NWS Products and Services meet expectations	80	79	82	79	75	74	79
How NWS compares to an 'ideal' weather products and services organization	83	82	84	82	79	79	83
Likelihood to Take Action	91	91	92	91	87	92	91
Likelihood to take action based on weather information you receive from NWS	91	91	92	91	87	92	91
Confidence in NWS	90	88	91	88	84	86	89
Confidence that NWS will do a good job of providing weather products and services	90	88	91	88	84	86	89
Likelihood to use an All Hazards NOAA Weather Radio	87	82	88	74	70	80	81
Likelihood to use IMS/GIS products available on the internet	90	88	92	88	82	88	88
Likelihood to use Text Forecast	88	89	89	88	90	87	89
Likelihood to use Graphical (Element Meteorogram) Forecast	65	62	65	69	68	64	56
Likelihood to use Experimental Graphical 3-Hourly Forecast	67	66	67	70	69	70	71
Likelihood to use Tabular Only Forecast	50	47	50	52	50	48	37
Likelihood to use Graphics Only Forecast	69	66	71	71	69	74	62
Likelihood to use Text and Iconic Forecast	87	86	88	81	71	69	80
Likelihood to use Graphics and Text Forecast	80	78	81	77	70	73	82
Short-term forecasts would be useful	76	79	72	78	79	85	36
UV forecasts for days beyond tomorrow	55	57	59	56	40	52	61
UV forecasts for other times of the day besides noon	60	61	64	58	42	55	61
Alert when UV conditions are unusually high	74	77	76	74	60	79	81
Accessibility of NWS personnel to your problem	80	76	80	77	76	68	89
Responsiveness of NWS personnel to your problem	76	70	77	72	69	50	89
Sample Size	2,642	3,063	1,777	2,057	327	88	23

23 respondents for International include: 21 Canada, 1 United Kingdom, 1 Armed Forces Europe



Score Summaries - NWS Internal by Primary Source

	Local TV Weathercast	National TV Weathercast	Commercial or Public Radio	All Hazards NOAA Weather Radio	NOAA NWS websites	Non-NOAA NWS websites	Internet Wireless	Newspaper	Other
Hazardous Weather Information	84	83	81	88	85	80	83	80	83
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	75	75	73	81	77	67	74	76	74
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	86	85	85	90	87	80	87	80	84
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	87	88	84	92	90	84	87	80	89
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77	77	73	83	78	69	76	76	76
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	86	86	84	90	87	80	86	81	82
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	88	88	86	93	90	84	88	82	89
Tornado Warning - Accuracy of the information	79	78	78	86	80	74	80	73	81
Tornado Warning - Amount of time to act	77	76	75	82	77	72	78	70	75
Tornado Warning - Expectations based on information provided	87	88	85	94	89	87	88	83	89
Freeze Watch or Warning - Accuracy of the information	83	82	82	88	85	81	86	80	83
Freeze Watch or Warning - Amount of time to act	86	87	85	92	89	86	89	83	87
Freeze Watch or Warning - Expectations based on information provided	90	90	88	95	93	90	90	84	92
Forecast Levels	80	80	78	82	80	75	81	75	78
State level forecasts	64	65	59	66	57	53	58	47	56
County or sub-county level forecasts	86	86	86	90	88	85	89	79	86
City or greater metropolitan area forecasts	89	88	87	88	89	86	90	89	87
Recreational locations forecasts	69	69	69	70	71	64	72	66	70
Forecast Elements	87	86	88	90	88	84	87	84	86
Maximum and Minimum Temperature	91	90	91	92	93	91	90	92	91
Probability of Precipitation	93	93	93	95	94	90	92	91	92
Precipitation Type	93	93	95	96	94	92	93	90	92
Air Quality	67	67	67	69	64	61	63	66	66
Amount of precipitation	91	91	93	93	92	90	91	87	91
Sky Cover	83	83	86	86	84	82	83	78	85
Wind Direction and Speed	84	84	84	90	87	83	88	81	88
Ultraviolet radiation levels	67	69	67	70	65	61	60	66	65
UV Index forecast	69	69	70	73	68	61	62	65	68
Watch/Warning/Advisory Headline Information	94	94	94	97	95	92	95	89	94
Extreme heat/extreme cold	85	84	85	87	83	81	83	79	81
Forecast Duration	88	89	88	91	90	86	90	82	87
Forecasts for the next 6 hours	89	90	88	94	92	88	91	80	91
Forecasts for the next 1 to 3 days	92	92	93	94	94	91	92	88	92
Forecasts for 4 through 7 days in the future	81	81	79	81	82	78	82	74	78
Short-term forecasts are useful	88	88	86	93	90	83	90	78	88
Other Routine Products	80	81	80	87	87	83	84	66	85
Storm summaries	83	84	82	88	88	84	85	70	86
Technical/Area Forecast Discussions	77	78	75	85	86	81	83	61	83
Winter Weather Information	91	91	91	94	92	89	92	88	92
Snowfall rate	89	89	88	92	90	88	91	80	91
Time of day snow begins/ends	91	90	91	94	92	91	91	85	91
Specific warnings	93	93	92	95	94	90	94	92	95
Specific advisories	92	92	92	95	93	89	93	94	93
Time of precipitation type change	91	91	92	94	92	90	91	91	93
Effect of high winds	89	89	90	93	89	86	90	88	90
Satisfaction	83	83	83	88	86	74	82	82	79
Overall Satisfaction with NWS Products and Services	88	88	88	92	90	80	86	87	85
How well NWS Products and Services meet expectations	78	79	78	83	81	69	79	74	75
How NWS compares to an 'ideal' weather products and services organization	82	82	82	87	84	70	81	82	77
Likelihood to Take Action	90	89	91	95	92	84	90	90	90
Likelihood to take action based on weather information you receive from NWS	90	89	91	95	92	84	90	90	90
Confidence in NWS	88	88	88	91	90	81	88	89	85
Confidence that NWS will do a good job of providing weather products and services	88	88	88	91	90	81	88	89	85
Likelihood to use an All Hazards NOAA Weather Radio	80	83	78	97	82	78	79	62	82
Likelihood to use IMS/GIS products available on the internet	85	88	81	91	90	87	91	75	91
Likelihood to use Text Forecast	87	88	90	92	89	85	87	86	88
Likelihood to use Graphical (Element Meteorogram) Forecast	57	57	56	66	68	66	60	61	66
Likelihood to use Experimental Graphical 3-Hourly Forecast	66	66	61	69	68	64	66	72	68
Likelihood to use Tabular Only Forecast	46	45	41	52	51	50	50	42	52
Likelihood to use Graphics Only Forecast	67	70	67	71	69	69	69	68	71
Likelihood to use Text and Iconic Forecast	86	87	82	86	85	77	81	78	83
Likelihood to use Graphics and Text Forecast	75	76	71	83	79	76	75	69	80
Short-term forecasts would be useful	73	75	72	83	80	75	80	81	78
UV forecasts for days beyond tomorrow	58	57	57	59	56	51	54	47	56
UV forecasts for other times of the day besides noon	63	61	63	65	60	53	57	61	62
Alert when UV conditions are unusually high	77	77	78	78	75	67	70	71	76
Accessibility of NWS personnel to your problem	77	78	70	77	79	73	77	80	76
Responsiveness of NWS personnel to your problem	71	71	66	78	74	64	69	88	72
Sample Size	1,418	485	249	552	6,298	522	153	47	297



Score Summaries - NWS Internal by Primary Reason

	Dress for the day	Vacation, travel, or social activity planning	Personal safety and protection of property	Educational purposes	Job or business activities	Exterior home or yard work	Transportation decisions for work, school, recreation, etc.
Hazardous Weather Information	84	83	87	86	83	82	84
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	75	73	79	75	75	75	76
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	87	85	88	88	86	84	86
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	88	87	91	91	88	87	88
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77	75	80	77	75	74	77
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	87	86	88	87	86	84	86
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	89	87	91	91	88	87	89
Tornado Warning - Accuracy of the information	79	77	83	81	78	77	78
Tornado Warning - Amount of time to act	76	77	79	78	75	75	76
Tornado Warning - Expectations based on information provided	88	86	92	91	88	87	87
Freeze Watch or Warning - Accuracy of the information	84	83	87	87	83	79	84
Freeze Watch or Warning - Amount of time to act	88	88	91	90	87	86	88
Freeze Watch or Warning - Expectations based on information provided	91	91	93	94	91	90	91
Forecast Levels	80	79	81	81	79	75	79
State level forecasts	56	53	62	58	59	57	60
County or sub-county level forecasts	87	85	90	88	88	87	87
City or greater metropolitan area forecasts	90	89	89	89	88	84	89
Recreational locations forecasts	70	74	71	70	68	64	69
Forecast Elements	87	85	90	88	87	86	87
Maximum and Minimum Temperature	94	93	92	93	91	92	91
Probability of Precipitation	94	93	94	93	93	93	93
Precipitation Type	95	92	94	94	93	91	94
Air Quality	67	62	69	67	61	62	64
Amount of precipitation	91	90	93	92	92	91	92
Sky Cover	85	83	85	84	83	82	82
Wind Direction and Speed	84	84	88	87	88	85	85
Ultraviolet radiation levels	67	62	70	67	62	61	64
UV Index forecast	70	65	71	70	65	66	67
Watch/Warning/Advisory Headline Information	94	92	97	96	95	93	94
Extreme heat/extreme cold	85	78	87	83	82	80	83
Forecast Duration	89	89	91	90	90	87	89
Forecasts for the next 6 hours	90	89	93	92	91	88	91
Forecasts for the next 1 to 3 days	93	94	94	93	93	91	93
Forecasts for 4 through 7 days in the future	80	82	81	81	82	78	80
Short-term forecasts are useful	88	86	92	90	89	86	89
Other Routine Products	82	82	87	90	85	79	84
Storm summaries	85	84	88	90	86	81	85
Technical/Area Forecast Discussions	79	80	86	90	84	77	81
Winter Weather Information	91	90	93	91	91	87	92
Snowfall rate	90	88	91	90	90	85	91
Time of day snow begins/ends	93	91	92	91	91	86	93
Specific warnings	93	92	95	94	93	88	94
Specific advisories	92	92	94	93	92	88	94
Time of precipitation type change	92	90	93	92	92	88	92
Effect of high winds	89	86	91	89	90	86	90
Satisfaction	84	82	86	84	84	83	84
Overall Satisfaction with NWS Products and Services	88	87	91	89	88	88	89
How well NWS Products and Services meet expectations	79	77	82	80	79	78	80
How NWS compares to an 'ideal' weather products and services organization	82	81	84	82	82	82	82
Likelihood to Take Action	90	89	94	89	91	89	91
Likelihood to take action based on weather information you receive from NWS	90	89	94	89	91	89	91
Confidence in NWS	88	87	91	89	88	87	89
Confidence that NWS will do a good job of providing weather products and services	88	87	91	89	88	87	89
Likelihood to use an All Hazards NOAA Weather Radio	82	75	89	85	81	75	79
Likelihood to use IMS/GIS products available on the internet	87	87	92	90	89	87	88
Likelihood to use Text Forecast	89	88	89	87	89	88	89
Likelihood to use Graphical (Element Meteorogram) Forecast	60	65	65	74	65	65	63
Likelihood to use Experimental Graphical 3-Hourly Forecast	65	65	70	68	67	67	67
Likelihood to use Tabular Only Forecast	46	48	50	57	51	51	47
Likelihood to use Graphics Only Forecast	66	67	71	74	68	66	68
Likelihood to use Text and Iconic Forecast	87	83	87	83	84	84	85
Likelihood to use Graphics and Text Forecast	76	75	82	82	78	72	78
Short-term forecasts would be useful	73	75	81	81	77	73	78
UV forecasts for days beyond tomorrow	57	53	59	59	54	50	54
UV forecasts for other times of the day besides noon	64	56	64	64	57	54	58
Alert when UV conditions are unusually high	78	71	78	78	71	70	73
Accessibility of NWS personnel to your problem	77	72	80	80	79	78	74
Responsiveness of NWS personnel to your problem	72	68	76	74	74	74	69
Sample Size	1,458	1,110	2,319	1,087	1,926	307	1,815



Score Summaries - Internet Panel by Gender

	Male	Female
Hazardous Weather Information	80	82
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	74	76
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	81	83
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	82	84
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77	78
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	83	83
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	85	85
Tornado Warning - Accuracy of the information	78	80
Tornado Warning - Amount of time to act	77	79
Tornado Warning - Expectations based on information provided	84	85
Freeze Watch or Warning - Accuracy of the information	83	83
Freeze Watch or Warning - Amount of time to act	84	87
Freeze Watch or Warning - Expectations based on information provided	87	88
Forecast Levels	78	77
State level forecasts	66	65
County or sub-county level forecasts	81	79
City or greater metropolitan area forecasts	87	87
Recreational locations forecasts	68	67
Forecast Elements	81	86
Maximum and Minimum Temperature	86	86
Probability of Precipitation	86	89
Precipitation Type	86	90
Air Quality	69	70
Amount of precipitation	82	87
Sky Cover	77	82
Wind Direction and Speed	74	77
Ultraviolet radiation levels	66	69
UV Index forecast	69	75
Watch/Warning/Advisory Headline Information	88	93
Extreme heat/extreme cold	83	87
Forecast Duration	82	86
Forecasts for the next 6 hours	83	86
Forecasts for the next 1 to 3 days	86	89
Forecasts for 4 through 7 days in the future	76	82
Short-term forecasts are useful	83	82
Other Routine Products	55	53
Storm summaries	58	55
Technical/Area Forecast Discussions	53	50
Winter Weather Information	83	89
Snowfall rate	80	86
Time of day snow begins/ends	81	88
Specific warnings	85	91
Specific advisories	85	91
Time of precipitation type change	84	89
Effect of high winds	82	88
Satisfaction	75	80
Overall Satisfaction with NWS Products and Services	79	83
How well NWS Products and Services meet expectations	70	75
How NWS compares to an 'ideal' weather products and services organization	74	79
Likelihood to Take Action	78	85
Likelihood to take action based on weather information you receive from NWS	78	85
Confidence in NWS	79	86
Confidence that NWS will do a good job of providing weather products and services	79	86

Likelihood to use an All Hazards NOAA Weather Radio	67	66
Likelihood to use IMS/GIS products available on the internet	77	74
Likelihood to use Text Forecast	81	82
Likelihood to use Graphical (Element Meteorogram) Forecast	42	30
Likelihood to use Experimental Graphical 3-Hourly Forecast	60	50
Likelihood to use Tabular Only Forecast	40	32
Likelihood to use Graphics Only Forecast	70	61
Likelihood to use Text and Iconic Forecast	81	85
Likelihood to use Graphics and Text Forecast	69	64
Short-term forecasts would be useful	64	70
UV forecasts for days beyond tomorrow	58	63
UV forecasts for other times of the day besides noon	63	72
Alert when UV conditions are unusually high	76	83
Accessibility of NWS personnel to your problem	78	70
Responsiveness of NWS personnel to your problem	84	48

Sample Size	230	232
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Score Summaries - Internet Panel by Age

	18-25	26-35	36-45	46-55	56-65	66 and above
Hazardous Weather Information	74	79	81	84	83	85
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	67	73	74	77	79	79
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	76	80	84	84	84	84
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	73	81	85	86	85	86
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	71	77	74	80	81	85
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	77	82	84	86	83	88
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	77	83	85	90	86	87
Tornado Warning - Accuracy of the information	70	77	79	81	81	87
Tornado Warning - Amount of time to act	72	72	78	81	81	86
Tornado Warning - Expectations based on information provided	77	82	86	85	88	87
Freeze Watch or Warning - Accuracy of the information	76	83	86	84	81	87
Freeze Watch or Warning - Amount of time to act	78	81	89	88	86	90
Freeze Watch or Warning - Expectations based on information provided	77	85	91	89	86	91
Forecast Levels	73	77	78	81	74	80
State level forecasts	67	61	68	68	59	72
County or sub-county level forecasts	73	81	81	82	77	84
City or greater metropolitan area forecasts	82	89	86	89	87	88
Recreational locations forecasts	63	67	70	75	64	67
Forecast Elements	77	82	83	85	85	87
Maximum and Minimum Temperature	83	86	87	85	86	91
Probability of Precipitation	81	88	87	90	88	93
Precipitation Type	82	90	88	90	88	89
Air Quality	62	65	68	72	75	72
Amount of precipitation	75	85	86	85	88	88
Sky Cover	77	82	80	80	80	80
Wind Direction and Speed	66	71	76	77	80	86
Ultraviolet radiation levels	63	64	66	73	69	67
UV Index forecast	62	64	75	75	71	80
Watch/Warning/Advisory Headline Information	82	90	90	93	93	95
Extreme heat/extreme cold	79	83	84	87	89	90
Forecast Duration	79	85	84	84	84	89
Forecasts for the next 6 hours	77	86	85	84	86	93
Forecasts for the next 1 to 3 days	83	89	88	87	88	90
Forecasts for 4 through 7 days in the future	77	77	79	79	79	84
Short-term forecasts are useful	78	81	81	86	83	84
Other Routine Products	50	52	56	55	54	58
Storm summaries	51	55	57	58	57	63
Technical/Area Forecast Discussions	47	50	54	53	51	54
Winter Weather Information	78	87	87	88	85	87
Snowfall rate	78	87	82	84	81	84
Time of day snow begins/ends	77	86	85	87	84	86
Specific warnings	81	89	89	89	87	88
Specific advisories	83	88	89	90	88	88
Time of precipitation type change	78	87	89	89	87	86
Effect of high winds	74	83	86	89	86	90
Satisfaction	71	76	75	81	78	83
Overall Satisfaction with NWS Products and Services	73	81	78	85	83	87
How well NWS Products and Services meet expectations	68	70	71	77	74	78
How NWS compares to an 'ideal' weather products and services organization	71	75	74	81	77	84
Likelihood to Take Action	69	80	82	86	82	87
Likelihood to take action based on weather information you receive from NWS	69	80	82	86	82	87
Confidence in NWS	74	82	82	84	84	89
Confidence that NWS will do a good job of providing weather products and services	74	82	82	84	84	89
Likelihood to use an All Hazards NOAA Weather Radio	56	63	66	74	70	71
Likelihood to use IMS/GIS products available on the internet	65	69	77	89	75	85
Likelihood to use Text Forecast	75	80	83	86	79	88
Likelihood to use Graphical (Element Meteorogram) Forecast	31	34	36	43	33	44
Likelihood to use Experimental Graphical 3-Hourly Forecast	48	57	56	62	49	55
Likelihood to use Tabular Only Forecast	40	34	36	36	35	38
Likelihood to use Graphics Only Forecast	64	64	67	69	61	70
Likelihood to use Text and Iconic Forecast	82	83	85	84	81	83
Likelihood to use Graphics and Text Forecast	58	61	68	72	67	73
Short-term forecasts would be useful	50	65	75	74	63	74
UV forecasts for days beyond tomorrow	58	51	66	61	57	66
UV forecasts for other times of the day besides noon	67	61	72	68	64	69
Alert when UV conditions are unusually high	79	67	80	83	84	80
Accessibility of NWS personnel to your problem	83	--	72	76	78	--
Responsiveness of NWS personnel to your problem	72	--	72	69	83	--
Sample Size	59	84	99	86	92	42

Note: No respondents fell into the Under 18 category.



Score Summaries - Internet Panel by Region

	Central Region	Eastern Region	Southern Region	Western Region
Hazardous Weather Information	83	80	82	78
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	75	74	77	74
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	82	83	84	77
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	85	83	84	81
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	79	77	79	75
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	85	84	84	79
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	86	84	86	84
Tornado Warning - Accuracy of the information	79	77	81	80
Tornado Warning - Amount of time to act	81	77	79	68
Tornado Warning - Expectations based on information provided	88	82	84	84
Freeze Watch or Warning - Accuracy of the information	85	82	84	84
Freeze Watch or Warning - Amount of time to act	86	83	88	85
Freeze Watch or Warning - Expectations based on information provided	91	85	88	83
Forecast Levels	78	76	80	76
State level forecasts	67	65	71	56
County or sub-county level forecasts	82	78	84	76
City or greater metropolitan area forecasts	86	86	89	88
Recreational locations forecasts	67	66	69	71
Forecast Elements	83	84	84	82
Maximum and Minimum Temperature	86	87	88	83
Probability of Precipitation	86	88	90	86
Precipitation Type	89	91	85	85
Air Quality	67	68	71	72
Amount of precipitation	87	86	83	81
Sky Cover	82	81	78	78
Wind Direction and Speed	75	75	76	77
Ultraviolet radiation levels	63	67	70	70
UV Index forecast	71	70	75	70
Watch/Warning/Advisory Headline Information	90	91	93	88
Extreme heat/extreme cold	86	86	85	85
Forecast Duration	84	85	84	82
Forecasts for the next 6 hours	86	85	87	79
Forecasts for the next 1 to 3 days	87	89	87	86
Forecasts for 4 through 7 days in the future	78	79	78	82
Short-term forecasts are useful	82	82	84	82
Other Routine Products	54	55	52	54
Storm summaries	56	59	55	55
Technical/Area Forecast Discussions	52	52	50	52
Winter Weather Information	90	89	81	71
Snowfall rate	88	87	74	67
Time of day snow begins/ends	90	90	76	65
Specific warnings	92	91	84	72
Specific advisories	92	91	86	75
Time of precipitation type change	90	89	84	74
Effect of high winds	89	87	83	74
Satisfaction	78	78	78	74
Overall Satisfaction with NWS Products and Services	82	82	82	77
How well NWS Products and Services meet expectations	73	74	73	70
How NWS compares to an 'ideal' weather products and services organization	76	78	77	73
Likelihood to Take Action	82	80	85	78
Likelihood to take action based on weather information you receive from NWS	82	80	85	78
Confidence in NWS	83	82	84	81
Confidence that NWS will do a good job of providing weather products and services	83	82	84	81
Likelihood to use an All Hazards NOAA Weather Radio	64	67	71	64
Likelihood to use IMS/GIS products available on the internet	77	76	77	72
Likelihood to use Text Forecast	84	82	82	78
Likelihood to use Graphical (Element Meteorogram) Forecast	37	35	37	36
Likelihood to use Experimental Graphical 3-Hourly Forecast	52	54	60	54
Likelihood to use Tabular Only Forecast	36	36	36	39
Likelihood to use Graphics Only Forecast	65	62	71	67
Likelihood to use Text and Iconic Forecast	84	82	87	78
Likelihood to use Graphics and Text Forecast	68	66	67	64
Short-term forecasts would be useful	66	66	73	65
UV forecasts for days beyond tomorrow	56	57	66	62
UV forecasts for other times of the day besides noon	63	65	72	69
Alert when UV conditions are unusually high	76	76	86	81
Accessibility of NWS personnel to your problem	83	64	89	67
Responsiveness of NWS personnel to your problem	85	64	81	74
Sample Size	115	161	101	84



Score Summaries - Internet Panel by Primary Source

	Local TV Weathercast	National TV Weathercast	Commercial or Public Radio	Non-NOAA NWS websites	Other
Hazardous Weather Information	82	80	78	84	82
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	75	75	73	77	75
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	82	82	81	84	83
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	83	82	82	87	83
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	78	76	73	79	76
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	84	80	78	86	87
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	85	82	84	89	87
Tornado Warning - Accuracy of the information	79	82	78	82	73
Tornado Warning - Amount of time to act	79	77	85	81	74
Tornado Warning - Expectations based on information provided	86	86	82	87	83
Freeze Watch or Warning - Accuracy of the information	83	84	77	89	84
Freeze Watch or Warning - Amount of time to act	86	86	81	92	88
Freeze Watch or Warning - Expectations based on information provided	88	87	78	90	89
Forecast Levels	76	76	72	81	79
State level forecasts	66	62	58	66	66
County or sub-county level forecasts	79	79	71	87	84
City or greater metropolitan area forecasts	86	86	88	90	89
Recreational locations forecasts	67	68	59	72	66
Forecast Elements	82	83	84	86	84
Maximum and Minimum Temperature	84	85	90	92	88
Probability of Precipitation	86	88	92	94	87
Precipitation Type	87	89	89	90	91
Air Quality	69	69	68	72	61
Amount of precipitation	83	85	86	86	89
Sky Cover	79	79	82	83	85
Wind Direction and Speed	75	74	80	80	75
Ultraviolet radiation levels	66	69	68	67	63
UV Index forecast	73	72	56	72	67
Watch/Warning/Advisory Headline Information	89	92	88	94	91
Extreme heat/extreme cold	84	87	84	87	86
Forecast Duration	82	87	82	90	82
Forecasts for the next 6 hours	83	86	84	91	89
Forecasts for the next 1 to 3 days	85	91	87	93	90
Forecasts for 4 through 7 days in the future	78	83	79	86	71
Short-term forecasts are useful	82	85	77	89	73
Other Routine Products	52	53	51	58	54
Storm summaries	54	57	52	64	55
Technical/Area Forecast Discussions	50	49	49	54	52
Winter Weather Information	85	83	84	90	86
Snowfall rate	82	80	80	88	78
Time of day snow begins/ends	84	80	85	87	85
Specific warnings	87	85	87	92	89
Specific advisories	87	86	86	94	89
Time of precipitation type change	86	83	88	90	86
Effect of high winds	84	82	81	91	87
Satisfaction	76	78	77	82	74
Overall Satisfaction with NWS Products and Services	80	82	82	85	77
How well NWS Products and Services meet expectations	72	74	72	77	71
How NWS compares to an 'ideal' weather products and services organization	76	77	76	82	73
Likelihood to Take Action	80	84	81	87	74
Likelihood to take action based on weather information you receive from NWS	80	84	81	87	74
Confidence in NWS	82	84	78	88	82
Confidence that NWS will do a good job of providing weather products and services	82	84	78	88	82
Likelihood to use an All Hazards NOAA Weather Radio	67	62	58	79	54
Likelihood to use IMS/GIS products available on the internet	72	76	73	77	75
Likelihood to use Text Forecast	82	82	77	87	70
Likelihood to use Graphical (Element Meteorogram) Forecast	34	38	31	42	31
Likelihood to use Experimental Graphical 3-Hourly Forecast	53	52	51	64	59
Likelihood to use Tabular Only Forecast	35	36	38	32	35
Likelihood to use Graphics Only Forecast	63	74	61	69	65
Likelihood to use Text and Iconic Forecast	82	83	79	88	88
Likelihood to use Graphics and Text Forecast	65	71	63	66	66
Short-term forecasts would be useful	67	66	69	59	67
UV forecasts for days beyond tomorrow	60	59	57	63	57
UV forecasts for other times of the day besides noon	68	65	69	69	54
Alert when UV conditions are unusually high	79	79	74	79	67
Accessibility of NWS personnel to your problem	79	67	--	94	--
Responsiveness of NWS personnel to your problem	84	72	--	72	--
Sample Size	258	72	20	43	30

Note: Sample sizes are too small to show scores for All Hazards NOAA Weather Radio (n=3), NOAA NWS websites (n=14), Internet Wireless (n=18), and Newspaper (n=8).



Score Summaries - Internet Panel by Primary Reason

	Dress for the day	Vacation, travel, or social activity planning	Personal safety and protection of property	Job or business activities	Transportation decisions for work, school, recreation, etc.
Hazardous Weather Information	83	78	85	81	79
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	78	69	79	72	72
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	84	77	84	78	80
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	84	81	87	81	82
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	80	72	82	79	75
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	85	81	86	81	81
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	86	83	89	84	84
Tornado Warning - Accuracy of the information	81	71	81	83	77
Tornado Warning - Amount of time to act	80	69	80	83	79
Tornado Warning - Expectations based on information provided	85	80	90	87	86
Freeze Watch or Warning - Accuracy of the information	85	81	85	86	81
Freeze Watch or Warning - Amount of time to act	87	85	90	82	83
Freeze Watch or Warning - Expectations based on information provided	87	87	90	85	86
Forecast Levels	77	75	76	81	77
State level forecasts	68	64	66	72	61
County or sub-county level forecasts	80	74	80	82	81
City or greater metropolitan area forecasts	88	86	84	89	87
Recreational locations forecasts	67	70	67	76	67
Forecast Elements	85	81	84	84	82
Maximum and Minimum Temperature	88	86	90	81	84
Probability of Precipitation	89	88	90	86	85
Precipitation Type	90	87	87	88	87
Air Quality	72	62	70	72	66
Amount of precipitation	86	81	82	84	85
Sky Cover	82	80	77	82	78
Wind Direction and Speed	76	71	78	86	74
Ultraviolet radiation levels	68	66	67	74	64
UV Index forecast	74	63	79	68	66
Watch/Warning/Advisory Headline Information	92	86	94	91	89
Extreme heat/extreme cold	86	82	86	86	86
Forecast Duration	84	82	87	84	82
Forecasts for the next 6 hours	86	80	89	85	83
Forecasts for the next 1 to 3 days	87	88	88	88	87
Forecasts for 4 through 7 days in the future	79	79	81	79	77
Short-term forecasts are useful	84	72	91	83	82
Other Routine Products	53	46	67	55	55
Storm summaries	55	49	70	59	58
Technical/Area Forecast Discussions	51	44	65	50	52
Winter Weather Information	87	81	84	89	85
Snowfall rate	84	78	82	89	82
Time of day snow begins/ends	87	75	84	88	84
Specific warnings	89	85	87	90	87
Specific advisories	89	86	87	90	87
Time of precipitation type change	89	82	84	89	86
Effect of high winds	87	81	83	89	84
Satisfaction	78	73	80	80	76
Overall Satisfaction with NWS Products and Services	83	75	82	83	80
How well NWS Products and Services meet expectations	74	68	76	77	71
How NWS compares to an 'ideal' weather products and services organization	77	73	80	79	75
Likelihood to Take Action	83	77	87	81	77
Likelihood to take action based on weather information you receive from NWS	83	77	87	81	77
Confidence in NWS	84	79	86	83	80
Confidence that NWS will do a good job of providing weather products and services	84	79	86	83	80
Likelihood to use an All Hazards NOAA Weather Radio	64	65	77	79	66
Likelihood to use IMS/GIS products available on the internet	72	76	85	84	76
Likelihood to use Text Forecast	81	82	86	84	81
Likelihood to use Graphical (Element Meteorogram) Forecast	35	34	41	42	35
Likelihood to use Experimental Graphical 3-Hourly Forecast	57	46	61	59	53
Likelihood to use Tabular Only Forecast	36	34	44	37	34
Likelihood to use Graphics Only Forecast	64	64	78	63	63
Likelihood to use Text and Iconic Forecast	83	85	87	77	82
Likelihood to use Graphics and Text Forecast	64	61	74	69	68
Short-term forecasts would be useful	66	60	71	74	67
UV forecasts for days beyond tomorrow	63	56	73	64	49
UV forecasts for other times of the day besides noon	72	60	77	64	55
Alert when UV conditions are unusually high	82	76	88	72	73
Accessibility of NWS personnel to your problem	78	--	93	89	--
Responsiveness of NWS personnel to your problem	86	--	78	81	--
Sample Size	195	54	43	27	118

Note: Sample sizes are too low to show scores for Educational purposes (n=4) and Exterior home or yard work (n=20).



Score Summaries - USAToday.com by Gender

	Male
Hazardous Weather Information	85
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	73
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	87
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	90
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	76
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	86
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	90
Tornado Warning - Accuracy of the information	74
Tornado Warning - Amount of time to act	83
Tornado Warning - Expectations based on information provided	91
Freeze Watch or Warning - Accuracy of the information	83
Freeze Watch or Warning - Amount of time to act	91
Freeze Watch or Warning - Expectations based on information provided	92
Forecast Levels	78
State level forecasts	64
County or sub-county level forecasts	84
City or greater metropolitan area forecasts	85
Recreational locations forecasts	67
Forecast Elements	85
Maximum and Minimum Temperature	92
Probability of Precipitation	86
Precipitation Type	89
Air Quality	63
Amount of precipitation	90
Sky Cover	82
Wind Direction and Speed	83
Ultraviolet radiation levels	64
UV Index forecast	74
Watch/Warning/Advisory Headline Information	93
Extreme heat/extreme cold	84
Forecast Duration	85
Forecasts for the next 6 hours	91
Forecasts for the next 1 to 3 days	89
Forecasts for 4 through 7 days in the future	70
Short-term forecasts are useful	85
Other Routine Products	78
Storm summaries	80
Technical/Area Forecast Discussions	76
Winter Weather Information	89
Snowfall rate	85
Time of day snow begins/ends	87
Specific warnings	93
Specific advisories	92
Time of precipitation type change	89
Effect of high winds	87
Satisfaction	78
Overall Satisfaction with NWS Products and Services	85
How well NWS Products and Services meet expectations	73
How NWS compares to an 'ideal' weather products and services organization	73
Likelihood to Take Action	87
Likelihood to take action based on weather information you receive from NWS	88
Confidence in NWS	83
Confidence that NWS will do a good job of providing weather products and services	83
Likelihood to use an All Hazards NOAA Weather Radio	79
Likelihood to use IMS/GIS products available on the internet	84
Likelihood to use Text Forecast	82
Likelihood to use Graphical (Element Meteorogram) Forecast	64
Likelihood to use Experimental Graphical 3-Hourly Forecast	71
Likelihood to use Tabular Only Forecast	50
Likelihood to use Graphics Only Forecast	72
Likelihood to use Text and Iconic Forecast	85
Likelihood to use Graphics and Text Forecast	75
Short-term forecasts would be useful	80
UV forecasts for days beyond tomorrow	56
UV forecasts for other times of the day besides noon	63
Alert when UV conditions are unusually high	84
Accessibility of NWS personnel to your problem	65
Responsiveness of NWS personnel to your problem	59
Sample Size	57

Note: Sample size is too low to show scores for Female (n=16).



Score Summaries - USAToday.com by Age

	46-55
Hazardous Weather Information	82
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	63
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	88
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	88
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	65
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	88
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	88
Tornado Warning - Accuracy of the information	73
Tornado Warning - Amount of time to act	84
Tornado Warning - Expectations based on information provided	89
Freeze Watch or Warning - Accuracy of the information	77
Freeze Watch or Warning - Amount of time to act	89
Freeze Watch or Warning - Expectations based on information provided	90
Forecast Levels	77
State level forecasts	65
County or sub-county level forecasts	87
City or greater metropolitan area forecasts	84
Recreational locations forecasts	63
Forecast Elements	87
Maximum and Minimum Temperature	95
Probability of Precipitation	90
Precipitation Type	95
Air Quality	62
Amount of precipitation	93
Sky Cover	85
Wind Direction and Speed	91
Ultraviolet radiation levels	67
UV Index forecast	71
Watch/Warning/Advisory Headline Information	91
Extreme heat/extreme cold	83
Forecast Duration	88
Forecasts for the next 6 hours	94
Forecasts for the next 1 to 3 days	90
Forecasts for 4 through 7 days in the future	71
Short-term forecasts are useful	91
Other Routine Products	76
Storm summaries	79
Technical/Area Forecast Discussions	70
Winter Weather Information	90
Snowfall rate	86
Time of day snow begins/ends	89
Specific warnings	93
Specific advisories	93
Time of precipitation type change	90
Effect of high winds	88
Satisfaction	76
Overall Satisfaction with NWS Products and Services	83
How well NWS Products and Services meet expectations	72
How NWS compares to an 'ideal' weather products and services organization	72
Likelihood to Take Action	86
Likelihood to take action based on weather information you receive from NWS	86
Confidence in NWS	83
Confidence that NWS will do a good job of providing weather products and services	83
Likelihood to use an All Hazards NOAA Weather Radio	80
Likelihood to use IMS/GIS products available on the internet	87
Likelihood to use Text Forecast	86
Likelihood to use Graphical (Element Meteorogram) Forecast	51
Likelihood to use Experimental Graphical 3-Hourly Forecast	69
Likelihood to use Tabular Only Forecast	56
Likelihood to use Graphics Only Forecast	72
Likelihood to use Text and Iconic Forecast	83
Likelihood to use Graphics and Text Forecast	75
Short-term forecasts would be useful	67
UV forecasts for days beyond tomorrow	53
UV forecasts for other times of the day besides noon	59
Alert when UV conditions are unusually high	80
Accessibility of NWS personnel to your problem	70
Responsiveness of NWS personnel to your problem	61
Sample Size	27

Note: Sample sizes are too low to show scores for Under 18 (n=2), 18-25 (n=4), 26-35 (n=11), 36-45 (n=11), 56-65 (n=13), and 66 and above (n=7).



Score Summaries - USAToday.com by Region

	Central Region
Hazardous Weather Information	85
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	71
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	88
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	89
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	74
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	88
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	89
Tornado Warning - Accuracy of the information	77
Tornado Warning - Amount of time to act	84
Tornado Warning - Expectations based on information provided	93
Freeze Watch or Warning - Accuracy of the information	84
Freeze Watch or Warning - Amount of time to act	90
Freeze Watch or Warning - Expectations based on information provided	92
Forecast Levels	82
State level forecasts	69
County or sub-county level forecasts	90
City or greater metropolitan area forecasts	88
Recreational locations forecasts	71
Forecast Elements	88
Maximum and Minimum Temperature	94
Probability of Precipitation	92
Precipitation Type	94
Air Quality	65
Amount of precipitation	94
Sky Cover	88
Wind Direction and Speed	87
Ultraviolet radiation levels	69
UV Index forecast	76
Watch/Warning/Advisory Headline Information	93
Extreme heat/extreme cold	84
Forecast Duration	88
Forecasts for the next 6 hours	91
Forecasts for the next 1 to 3 days	91
Forecasts for 4 through 7 days in the future	78
Short-term forecasts are useful	89
Other Routine Products	82
Storm summaries	86
Technical/Area Forecast Discussions	76
Winter Weather Information	93
Snowfall rate	91
Time of day snow begins/ends	94
Specific warnings	96
Specific advisories	94
Time of precipitation type change	93
Effect of high winds	91
Satisfaction	80
Overall Satisfaction with NWS Products and Services	87
How well NWS Products and Services meet expectations	75
How NWS compares to an 'ideal' weather products and services organization	76
Likelihood to Take Action	90
Likelihood to take action based on weather information you receive from NWS	90
Confidence in NWS	86
Confidence that NWS will do a good job of providing weather products and services	86
Likelihood to use an All Hazards NOAA Weather Radio	85
Likelihood to use IMS/GIS products available on the internet	92
Likelihood to use Text Forecast	86
Likelihood to use Graphical (Element Meteorogram) Forecast	67
Likelihood to use Experimental Graphical 3-Hourly Forecast	76
Likelihood to use Tabular Only Forecast	56
Likelihood to use Graphics Only Forecast	77
Likelihood to use Text and Iconic Forecast	84
Likelihood to use Graphics and Text Forecast	77
Short-term forecasts would be useful	78
UV forecasts for days beyond tomorrow	58
UV forecasts for other times of the day besides noon	63
Alert when UV conditions are unusually high	84
Accessibility of NWS personnel to your problem	78
Responsiveness of NWS personnel to your problem	72
Sample Size	40



Score Summaries - USAToday.com by Primary Source

	Local TV Weathercast
Hazardous Weather Information	81
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	66
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	83
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	84
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	71
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	83
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	85
Tornado Warning - Accuracy of the information	75
Tornado Warning - Amount of time to act	79
Tornado Warning - Expectations based on information provided	84
Freeze Watch or Warning - Accuracy of the information	81
Freeze Watch or Warning - Amount of time to act	90
Freeze Watch or Warning - Expectations based on information provided	92
Forecast Levels	82
State level forecasts	70
County or sub-county level forecasts	88
City or greater metropolitan area forecasts	90
Recreational locations forecasts	70
Forecast Elements	90
Maximum and Minimum Temperature	97
Probability of Precipitation	92
Precipitation Type	95
Air Quality	73
Amount of precipitation	94
Sky Cover	85
Wind Direction and Speed	88
Ultraviolet radiation levels	75
UV Index forecast	86
Watch/Warning/Advisory Headline Information	94
Extreme heat/extreme cold	90
Forecast Duration	88
Forecasts for the next 6 hours	94
Forecasts for the next 1 to 3 days	94
Forecasts for 4 through 7 days in the future	73
Short-term forecasts are useful	86
Other Routine Products	73
Storm summaries	74
Technical/Area Forecast Discussions	71
Winter Weather Information	89
Snowfall rate	87
Time of day snow begins/ends	89
Specific warnings	91
Specific advisories	91
Time of precipitation type change	89
Effect of high winds	86
Satisfaction	75
Overall Satisfaction with NWS Products and Services	81
How well NWS Products and Services meet expectations	68
How NWS compares to an 'ideal' weather products and services organization	74
Likelihood to Take Action	85
Likelihood to take action based on weather information you receive from NWS	85
Confidence in NWS	80
Confidence that NWS will do a good job of providing weather products and services	80
Likelihood to use an All Hazards NOAA Weather Radio	72
Likelihood to use IMS/GIS products available on the internet	69
Likelihood to use Text Forecast	79
Likelihood to use Graphical (Element Meteorogram) Forecast	44
Likelihood to use Experimental Graphical 3-Hourly Forecast	70
Likelihood to use Tabular Only Forecast	53
Likelihood to use Graphics Only Forecast	69
Likelihood to use Text and Iconic Forecast	79
Likelihood to use Graphics and Text Forecast	70
Short-term forecasts would be useful	82
UV forecasts for days beyond tomorrow	67
UV forecasts for other times of the day besides noon	82
Alert when UV conditions are unusually high	93
Accessibility of NWS personnel to your problem	58
Responsiveness of NWS personnel to your problem	50
Sample Size	26

Note: Sample sizes too small to show scores for National TV Weathercast (n=9), Commercial or Public Radio (n=3), All Hazards NOAA Weather Radio (n=5), NOAA NWS websites (n=18), Non-NOAA NWS websites (n=7), Internet Wireless (n=1), Newspaper (n=0), and Other (n=4).



Score Summaries - USAToday.com by Primary Reason

	Dress for the day
Hazardous Weather Information	81
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	63
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	84
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	87
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	65
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	84
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	90
Tornado Warning - Accuracy of the information	77
Tornado Warning - Amount of time to act	75
Tornado Warning - Expectations based on information provided	86
Freeze Watch or Warning - Accuracy of the information	77
Freeze Watch or Warning - Amount of time to act	89
Freeze Watch or Warning - Expectations based on information provided	90
Forecast Levels	79
State level forecasts	62
County or sub-county level forecasts	78
City or greater metropolitan area forecasts	89
Recreational locations forecasts	75
Forecast Elements	86
Maximum and Minimum Temperature	92
Probability of Precipitation	88
Precipitation Type	92
Air Quality	68
Amount of precipitation	88
Sky Cover	88
Wind Direction and Speed	81
Ultraviolet radiation levels	67
UV Index forecast	77
Watch/Warning/Advisory Headline Information	93
Extreme heat/extreme cold	87
Forecast Duration	83
Forecasts for the next 6 hours	92
Forecasts for the next 1 to 3 days	87
Forecasts for 4 through 7 days in the future	68
Short-term forecasts are useful	81
Other Routine Products	75
Storm summaries	74
Technical/Area Forecast Discussions	76
Winter Weather Information	89
Snowfall rate	88
Time of day snow begins/ends	90
Specific warnings	90
Specific advisories	90
Time of precipitation type change	91
Effect of high winds	83
Satisfaction	74
Overall Satisfaction with NWS Products and Services	82
How well NWS Products and Services meet expectations	67
How NWS compares to an 'ideal' weather products and services organization	71
Likelihood to Take Action	86
Likelihood to take action based on weather information you receive from NWS	86
Confidence in NWS	79
Confidence that NWS will do a good job of providing weather products and services	79
Likelihood to use an All Hazards NOAA Weather Radio	77
Likelihood to use IMS/GIS products available on the internet	81
Likelihood to use Text Forecast	78
Likelihood to use Graphical (Element Meteorogram) Forecast	46
Likelihood to use Experimental Graphical 3-Hourly Forecast	63
Likelihood to use Tabular Only Forecast	53
Likelihood to use Graphics Only Forecast	67
Likelihood to use Text and Iconic Forecast	88
Likelihood to use Graphics and Text Forecast	72
Short-term forecasts would be useful	56
UV forecasts for days beyond tomorrow	65
UV forecasts for other times of the day besides noon	74
Alert when UV conditions are unusually high	83
Accessibility of NWS personnel to your problem	78
Responsiveness of NWS personnel to your problem	74
Sample Size	20

Note: Sample sizes too low to show scores for Vacation, travel, or social activity planning (n=10), Personal safety and protection of property (n=16), Educational purposes (n=5), Job or business activities (n=13), Exterior home or yard work (n=1), and Transportation decisions for work, school, recreation, etc. (n=10).



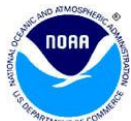
Score Summaries - Aggregate by Gender

	Male	Female
Hazardous Weather Information	84	86
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	75	79
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	86	88
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	88	89
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77	80
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	86	88
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	89	90
Tornado Warning - Accuracy of the information	79	82
Tornado Warning - Amount of time to act	77	79
Tornado Warning - Expectations based on information provided	89	89
Freeze Watch or Warning - Accuracy of the information	84	86
Freeze Watch or Warning - Amount of time to act	88	89
Freeze Watch or Warning - Expectations based on information provided	91	92
Forecast Levels	79	80
State level forecasts	58	62
County or sub-county level forecasts	87	87
City or greater metropolitan area forecasts	88	90
Recreational locations forecasts	70	70
Forecast Elements	87	90
Maximum and Minimum Temperature	92	91
Probability of Precipitation	93	94
Precipitation Type	93	94
Air Quality	64	71
Amount of precipitation	91	93
Sky Cover	83	85
Wind Direction and Speed	86	85
Ultraviolet radiation levels	64	71
UV Index forecast	67	75
Watch/Warning/Advisory Headline Information	94	96
Extreme heat/extreme cold	83	87
Forecast Duration	89	91
Forecasts for the next 6 hours	90	92
Forecasts for the next 1 to 3 days	93	94
Forecasts for 4 through 7 days in the future	80	83
Short-term forecasts are useful	88	91
Other Routine Products	84	81
Storm summaries	85	84
Technical/Area Forecast Discussions	83	78
Winter Weather Information	91	93
Snowfall rate	89	91
Time of day snow begins/ends	91	93
Specific warnings	93	95
Specific advisories	92	95
Time of precipitation type change	91	93
Effect of high winds	88	92
Satisfaction	83	86
Overall Satisfaction with NWS Products and Services	88	90
How well NWS Products and Services meet expectations	79	81
How NWS compares to an 'ideal' weather products and services organization	82	85
Likelihood to Take Action	90	92
Likelihood to take action based on weather information you receive from NWS	90	92
Confidence in NWS	88	91
Confidence that NWS will do a good job of providing weather products and services	88	91
Likelihood to use an All Hazards NOAA Weather Radio	82	81
Likelihood to use IMS/GIS products available on the internet	89	87
Likelihood to use Text Forecast	88	89
Likelihood to use Graphical (Element Meteorogram) Forecast	67	52
Likelihood to use Experimental Graphical 3-Hourly Forecast	67	65
Likelihood to use Tabular Only Forecast	51	42
Likelihood to use Graphics Only Forecast	70	64
Likelihood to use Text and Iconic Forecast	84	87
Likelihood to use Graphics and Text Forecast	78	77
Short-term forecasts would be useful	75	77
UV forecasts for days beyond tomorrow	55	60
UV forecasts for other times of the day besides noon	59	68
Alert when UV conditions are unusually high	74	83
Accessibility of NWS personnel to your problem	78	79
Responsiveness of NWS personnel to your problem	73	75
Sample Size	8,373	2,178



Score Summaries - Aggregate by Age

	Under 18	18-25	26-35	36-45	46-55	56-65	66 and above
Hazardous Weather Information	84	84	83	84	85	85	85
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	70	74	74	75	76	78	78
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	87	86	85	86	87	87	87
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	87	88	87	88	90	89	89
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77	77	76	77	77	79	79
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	85	86	85	86	87	87	88
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	89	89	87	88	90	90	89
Tornado Warning - Accuracy of the information	82	80	80	80	80	78	79
Tornado Warning - Amount of time to act	73	77	76	78	77	78	80
Tornado Warning - Expectations based on information provided	90	89	88	89	89	90	88
Freeze Watch or Warning - Accuracy of the information	87	87	85	85	84	83	84
Freeze Watch or Warning - Amount of time to act	89	89	88	88	88	89	91
Freeze Watch or Warning - Expectations based on information provided	92	92	91	91	92	92	93
Forecast Levels	80	79	80	80	80	80	78
State level forecasts	55	57	56	58	61	61	64
County or sub-county level forecasts	86	87	87	87	88	88	87
City or greater metropolitan area forecasts	90	88	89	89	88	88	88
Recreational locations forecasts	76	72	71	71	70	69	63
Forecast Elements	87	88	87	87	88	87	88
Maximum and Minimum Temperature	92	93	92	91	92	92	92
Probability of Precipitation	91	92	93	92	94	93	94
Precipitation Type	94	94	94	93	94	92	92
Air Quality	70	66	64	65	65	65	67
Amount of precipitation	91	90	91	91	92	92	93
Sky Cover	82	83	83	83	84	84	83
Wind Direction and Speed	84	83	83	86	87	87	88
Ultraviolet radiation levels	71	68	65	66	66	64	63
UV Index forecast	76	72	68	69	68	66	65
Watch/Warning/Advisory Headline Information	96	95	95	95	95	94	95
Extreme heat/extreme cold	86	84	83	83	83	83	84
Forecast Duration	89	89	89	89	90	89	88
Forecasts for the next 6 hours	92	92	91	90	91	90	90
Forecasts for the next 1 to 3 days	91	92	93	93	94	92	92
Forecasts for 4 through 7 days in the future	83	80	80	80	82	80	81
Short-term forecasts are useful	88	90	88	88	90	89	88
Other Routine Products	88	85	85	85	84	81	78
Storm summaries	89	86	86	86	85	83	81
Technical/Area Forecast Discussions	86	84	83	83	82	79	75
Winter Weather Information	92	91	91	91	92	91	90
Snowfall rate	92	90	91	90	90	88	88
Time of day snow begins/ends	92	92	93	92	92	89	89
Specific warnings	94	93	93	94	94	92	92
Specific advisories	92	92	92	93	94	92	92
Time of precipitation type change	92	91	92	91	92	91	90
Effect of high winds	88	88	88	89	90	90	90
Satisfaction	84	82	83	84	85	85	85
Overall Satisfaction with NWS Products and Services	88	86	88	89	89	89	89
How well NWS Products and Services meet expectations	79	77	78	79	80	80	79
How NWS compares to an 'ideal' weather products and services organization	83	80	81	82	83	83	84
Likelihood to Take Action	87	87	89	91	92	92	92
Likelihood to take action based on weather information you receive from NWS	87	87	89	91	92	92	92
Confidence in NWS	89	87	88	89	89	88	89
Confidence that NWS will do a good job of providing weather products and services	89	87	88	89	89	88	89
Likelihood to use an All Hazards NOAA Weather Radio	86	86	83	83	81	79	76
Likelihood to use IMS/GIS products available on the internet	87	89	89	90	89	88	86
Likelihood to use Text Forecast	88	86	87	88	90	89	90
Likelihood to use Graphical (Element Meteorogram) Forecast	70	65	63	64	64	62	61
Likelihood to use Experimental Graphical 3-Hourly Forecast	77	67	67	67	67	65	64
Likelihood to use Tabular Only Forecast	61	53	48	49	49	47	45
Likelihood to use Graphics Only Forecast	78	73	69	67	69	68	68
Likelihood to use Text and Iconic Forecast	91	87	85	84	85	85	85
Likelihood to use Graphics and Text Forecast	85	80	80	79	78	75	72
Short-term forecasts would be useful	74	63	72	76	79	74	77
UV forecasts for days beyond tomorrow	70	62	57	57	55	53	51
UV forecasts for other times of the day besides noon	76	70	63	61	59	56	52
Alert when UV conditions are unusually high	86	81	75	76	74	74	72
Accessibility of NWS personnel to your problem	65	83	77	78	79	76	78
Responsiveness of NWS personnel to your problem	68	76	72	73	75	71	75
Sample Size	256	843	1,771	2,508	2,856	1,723	627



Score Summaries - Aggregate by Region

	Central Region	Eastern Region	Southern Region	Western Region	Alaska Region	Pacific Region	International
Hazardous Weather Information	85	85	86	83	79	84	85
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	75	75	78	76	71	75	79
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	87	87	88	84	81	86	83
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	90	89	90	87	87	89	91
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	78	77	79	77	71	76	88
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	87	87	88	85	81	86	92
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	90	89	90	87	87	89	94
Tornado Warning - Accuracy of the information	81	78	81	76	--	81	70
Tornado Warning - Amount of time to act	80	75	78	71	--	62	62
Tornado Warning - Expectations based on information provided	91	87	90	82	--	79	78
Freeze Watch or Warning - Accuracy of the information	85	85	85	83	82	94	91
Freeze Watch or Warning - Amount of time to act	88	89	90	86	84	89	89
Freeze Watch or Warning - Expectations based on information provided	92	92	93	90	91	94	92
Forecast Levels	80	79	82	79	75	79	76
State level forecasts	61	58	63	55	50	69	56
County or sub-county level forecasts	88	88	89	85	76	82	76
City or greater metropolitan area forecasts	88	88	90	89	90	87	87
Recreational locations forecasts	69	67	72	74	72	69	73
Forecast Elements	88	88	89	87	85	85	91
Maximum and Minimum Temperature	92	92	93	92	92	84	90
Probability of Precipitation	93	93	94	94	90	89	94
Precipitation Type	94	96	93	90	93	71	93
Air Quality	63	66	67	67	56	69	81
Amount of precipitation	92	93	89	91	89	91	93
Sky Cover	84	82	84	83	83	85	90
Wind Direction and Speed	87	84	87	86	89	91	90
Ultraviolet radiation levels	65	66	69	65	47	73	80
UV Index forecast	67	69	71	67	54	69	71
Watch/Warning/Advisory Headline Information	95	95	96	93	92	97	96
Extreme heat/extreme cold	85	84	85	81	76	73	94
Forecast Duration	89	89	90	90	87	89	87
Forecasts for the next 6 hours	92	91	91	89	90	92	90
Forecasts for the next 1 to 3 days	92	93	93	94	93	92	91
Forecasts for 4 through 7 days in the future	80	80	82	85	73	79	81
Short-term forecasts are useful	90	88	89	88	86	90	92
Other Routine Products	83	84	84	83	83	84	82
Storm summaries	85	86	84	84	83	83	84
Technical/Area Forecast Discussions	81	82	83	82	82	85	80
Winter Weather Information	93	93	90	87	91	42	95
Snowfall rate	91	92	86	84	90	31	93
Time of day snow begins/ends	93	95	89	84	88	33	94
Specific warnings	94	95	93	88	94	41	96
Specific advisories	93	94	93	89	93	40	96
Time of precipitation type change	93	94	91	87	88	31	96
Effect of high winds	91	90	87	87	88	44	96
Satisfaction	84	84	86	83	81	81	86
Overall Satisfaction with NWS Products and Services	89	88	90	88	87	86	91
How well NWS Products and Services meet expectations	80	79	81	78	75	74	79
How NWS compares to an 'ideal' weather products and services organization	82	82	84	81	79	79	83
Likelihood to Take Action	91	91	92	90	87	92	91
Likelihood to take action based on weather information you receive from NWS	91	91	92	90	87	92	91
Confidence in NWS	89	88	90	87	84	86	89
Confidence that NWS will do a good job of providing weather products and services	89	88	90	87	84	86	89
Likelihood to use an All Hazards NOAA Weather Radio	86	81	87	73	70	80	81
Likelihood to use IMS/GIS products available on the internet	90	88	91	88	82	88	88
Likelihood to use Text Forecast	88	89	89	88	90	87	89
Likelihood to use Graphical (Element Meteorogram) Forecast	64	61	64	67	68	64	56
Likelihood to use Experimental Graphical 3-Hourly Forecast	66	66	67	69	69	70	71
Likelihood to use Tabular Only Forecast	50	46	50	52	50	48	37
Likelihood to use Graphics Only Forecast	69	66	71	70	69	74	62
Likelihood to use Text and Iconic Forecast	87	86	88	81	71	69	80
Likelihood to use Graphics and Text Forecast	79	77	80	76	70	73	82
Short-term forecasts would be useful	73	76	72	76	79	85	36
UV forecasts for days beyond tomorrow	55	57	59	56	40	52	61
UV forecasts for other times of the day besides noon	60	61	64	59	42	55	61
Alert when UV conditions are unusually high	74	77	76	74	60	79	81
Accessibility of NWS personnel to your problem	80	76	80	77	76	68	89
Responsiveness of NWS personnel to your problem	76	70	76	72	69	50	89
Sample Size	2,797	3,236	1,890	2,151	327	88	23



Score Summaries - Aggregate by Primary Source

	Local TV Weathercast	National TV Weathercast	Commercial or Public Radio	All Hazards NOAA Weather Radio	NOAA NWS websites	Non-NOAA NWS websites	Internet Wireless	Newspaper	Other
Hazardous Weather Information	83	83	81	88	85	80	82	80	83
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	75	75	73	81	77	68	74	76	74
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	86	85	84	90	87	81	86	80	84
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	87	87	84	92	90	84	85	81	89
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77	77	73	83	78	70	76	76	75
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	86	85	84	90	87	81	86	81	83
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	87	87	86	93	90	85	87	82	89
Tornado Warning - Accuracy of the information	79	79	78	86	80	75	78	72	81
Tornado Warning - Amount of time to act	77	77	76	82	77	73	77	69	75
Tornado Warning - Expectations based on information provided	87	88	84	94	89	87	87	82	89
Freeze Watch or Warning - Accuracy of the information	83	82	81	88	85	81	85	79	83
Freeze Watch or Warning - Amount of time to act	86	87	85	92	89	86	88	82	87
Freeze Watch or Warning - Expectations based on information provided	90	90	88	95	93	90	89	82	92
Forecast Levels	80	80	77	82	80	76	81	77	78
State level forecasts	64	64	59	66	57	54	60	50	57
County or sub-county level forecasts	85	85	85	90	88	85	88	80	86
City or greater metropolitan area forecasts	89	87	87	88	89	86	90	90	87
Recreational locations forecasts	69	69	68	70	71	65	71	68	70
Forecast Elements	86	86	88	90	88	84	86	84	86
Maximum and Minimum Temperature	90	89	91	92	93	91	90	91	91
Probability of Precipitation	92	92	93	95	94	90	92	91	91
Precipitation Type	92	92	94	96	94	92	93	89	92
Air Quality	68	67	68	69	64	62	63	69	65
Amount of precipitation	90	90	92	93	92	90	91	87	91
Sky Cover	83	83	85	86	84	82	83	78	85
Wind Direction and Speed	83	83	83	90	87	83	85	82	87
Ultraviolet radiation levels	67	69	67	70	65	62	60	68	65
UV Index forecast	70	70	69	73	68	62	63	66	68
Watch/Warning/Advisory Headline Information	93	94	93	97	95	92	94	90	94
Extreme heat/extreme cold	85	84	85	87	83	81	83	80	82
Forecast Duration	87	88	88	91	90	86	89	82	87
Forecasts for the next 6 hours	88	90	88	94	92	88	90	81	91
Forecasts for the next 1 to 3 days	91	92	92	94	94	91	91	88	92
Forecasts for 4 through 7 days in the future	80	81	79	81	82	79	82	75	77
Short-term forecasts are useful	87	87	86	93	90	83	90	77	88
Other Routine Products	76	77	77	87	87	81	82	66	82
Storm summaries	78	80	80	88	88	83	83	69	83
Technical/Area Forecast Discussions	73	74	72	85	86	79	80	61	80
Winter Weather Information	90	90	91	94	92	89	92	88	92
Snowfall rate	88	88	88	92	90	88	91	81	90
Time of day snow begins/ends	90	89	91	94	92	91	91	85	91
Specific warnings	92	92	92	95	94	90	94	92	95
Specific advisories	91	92	92	95	93	90	93	93	93
Time of precipitation type change	90	90	92	94	92	90	91	91	92
Effect of high winds	89	88	89	93	89	86	90	88	89
Satisfaction	82	83	82	88	86	74	82	81	79
Overall Satisfaction with NWS Products and Services	86	88	87	92	90	80	86	86	84
How well NWS Products and Services meet expectations	77	78	78	83	81	69	78	74	75
How NWS compares to an 'ideal' weather products and services organization	81	81	81	86	84	71	80	81	77
Likelihood to Take Action	88	89	90	95	92	84	89	88	89
Likelihood to take action based on weather information you receive from NWS	88	89	90	95	92	84	89	88	89
Confidence in NWS	87	87	87	91	90	82	87	88	85
Confidence that NWS will do a good job of providing weather products and services	87	87	87	91	90	82	87	88	85
Likelihood to use an All Hazards NOAA Weather Radio	78	81	76	96	82	78	78	65	79
Likelihood to use IMS/GIS products available on the internet	84	87	81	91	90	87	90	75	91
Likelihood to use Text Forecast	86	87	89	92	89	85	87	85	86
Likelihood to use Graphical (Element Meteorogram) Forecast	53	54	54	66	68	64	57	60	63
Likelihood to use Experimental Graphical 3-Hourly Forecast	64	64	60	69	68	64	65	70	67
Likelihood to use Tabular Only Forecast	44	44	41	52	51	48	49	43	50
Likelihood to use Graphics Only Forecast	67	71	66	71	69	69	67	68	70
Likelihood to use Text and Iconic Forecast	85	86	82	86	85	78	81	78	83
Likelihood to use Graphics and Text Forecast	73	75	70	82	79	76	74	69	79
Short-term forecasts would be useful	71	72	71	84	80	72	76	79	74
UV forecasts for days beyond tomorrow	58	57	57	59	56	51	55	49	55
UV forecasts for other times of the day besides noon	64	62	63	65	60	53	58	60	62
Alert when UV conditions are unusually high	77	77	78	78	75	68	71	72	76
Accessibility of NWS personnel to your problem	77	78	70	77	79	73	75	80	76
Responsiveness of NWS personnel to your problem	71	72	66	78	74	63	68	88	72
Sample Size	1,702	566	272	560	6,329	572	170	53	331



Score Summaries - Aggregate by Primary Reason

	Dress for the day	Vacation, travel, or social activity planning	Personal safety and protection of property	Educational purposes	Job or business activities	Exterior home or yard work	Transportation decisions for work, school, recreation, etc.
Hazardous Weather Information	84	82	87	86	83	82	84
Winter Storm, High Wind, Excessive Heat Watch - Accuracy of the information	75	73	79	75	75	75	76
Winter Storm, High Wind, Excessive Heat Watch - Amount of time to act	86	84	88	88	86	83	86
Winter Storm, High Wind, Excessive Heat Watch - Expectations based on information provided	87	87	91	91	88	87	88
Winter Storm, High Wind, Excessive Heat Warning - Accuracy of the information	77	75	80	77	75	74	77
Winter Storm, High Wind, Excessive Heat Warning - Amount of time to act	86	86	88	87	86	84	86
Winter Storm, High Wind, Excessive Heat Warning - Expectations based on information provided	88	87	91	91	88	87	88
Tornado Warning - Accuracy of the information	79	76	83	81	78	78	78
Tornado Warning - Amount of time to act	77	77	79	78	75	74	76
Tornado Warning - Expectations based on information provided	87	86	92	91	88	86	87
Freeze Watch or Warning - Accuracy of the information	84	83	87	87	83	79	84
Freeze Watch or Warning - Amount of time to act	88	88	91	90	87	85	88
Freeze Watch or Warning - Expectations based on information provided	91	90	93	94	91	89	91
Forecast Levels	80	79	81	80	79	76	79
State level forecasts	58	54	62	58	60	58	60
County or sub-county level forecasts	86	84	90	88	88	86	87
City or greater metropolitan area forecasts	90	89	89	89	88	84	88
Recreational locations forecasts	70	74	71	70	68	65	69
Forecast Elements	87	85	90	88	88	87	87
Maximum and Minimum Temperature	93	92	92	93	91	91	91
Probability of Precipitation	93	93	94	93	93	92	93
Precipitation Type	94	92	94	94	93	91	94
Air Quality	68	62	69	68	61	63	65
Amount of precipitation	90	90	92	92	92	90	92
Sky Cover	84	83	85	84	83	82	82
Wind Direction and Speed	83	84	88	87	88	84	84
Ultraviolet radiation levels	67	62	70	67	62	62	64
UV Index forecast	70	65	71	70	65	67	67
Watch/Warning/Advisory Headline Information	94	92	97	96	95	93	94
Extreme heat/extreme cold	85	78	87	83	82	81	83
Forecast Duration	88	88	91	90	90	87	89
Forecasts for the next 6 hours	90	88	93	92	91	88	91
Forecasts for the next 1 to 3 days	92	94	93	93	93	91	93
Forecasts for 4 through 7 days in the future	79	82	81	81	82	78	80
Short-term forecasts are useful	87	86	92	90	89	86	88
Other Routine Products	79	81	87	90	85	78	82
Storm summaries	81	83	88	90	86	79	83
Technical/Area Forecast Discussions	76	78	85	90	84	76	80
Winter Weather Information	91	89	93	91	91	87	92
Snowfall rate	89	87	91	90	90	85	91
Time of day snow begins/ends	92	90	92	91	91	86	92
Specific warnings	92	92	94	94	93	88	94
Specific advisories	91	92	94	93	92	88	93
Time of precipitation type change	92	90	92	92	92	87	92
Effect of high winds	88	86	91	89	90	86	90
Satisfaction	83	82	86	84	84	83	84
Overall Satisfaction with NWS Products and Services	88	87	90	89	88	88	89
How well NWS Products and Services meet expectations	78	76	82	80	79	78	79
How NWS compares to an 'ideal' weather products and services organization	81	80	84	82	82	81	82
Likelihood to Take Action	89	88	94	89	91	89	90
Likelihood to take action based on weather information you receive from NWS	89	88	94	89	91	89	90
Confidence in NWS	88	86	91	89	88	87	88
Confidence that NWS will do a good job of providing weather products and services	88	86	91	89	88	87	88
Likelihood to use an All Hazards NOAA Weather Radio	80	74	89	84	81	75	79
Likelihood to use IMS/GIS products available on the internet	86	87	92	90	89	86	88
Likelihood to use Text Forecast	88	88	89	87	89	88	88
Likelihood to use Graphical (Element Meteorogram) Forecast	57	64	64	74	65	63	61
Likelihood to use Experimental Graphical 3-Hourly Forecast	64	64	70	68	67	66	67
Likelihood to use Tabular Only Forecast	45	48	50	57	51	50	46
Likelihood to use Graphics Only Forecast	66	67	71	74	68	67	68
Likelihood to use Text and Iconic Forecast	86	83	87	83	84	84	84
Likelihood to use Graphics and Text Forecast	75	74	81	82	78	72	77
Short-term forecasts would be useful	70	73	80	81	77	73	76
UV forecasts for days beyond tomorrow	58	53	59	58	55	51	53
UV forecasts for other times of the day besides noon	65	56	64	64	57	56	58
Alert when UV conditions are unusually high	78	72	79	78	72	71	74
Accessibility of NWS personnel to your problem	77	71	80	80	79	78	74
Responsiveness of NWS personnel to your problem	73	68	75	74	74	74	69
Sample Size	1,673	1,174	2,378	1,095	1,966	327	1,943



National Oceanic and Atmospheric Administration
National Weather Service
General Public Customer Satisfaction

Questionnaire



Questionnaire

National Weather Service General Public Customer Satisfaction Study 2005

Introduction

The National Oceanic and Atmospheric Administration's (NOAA's) National Weather Service (NWS) is deeply committed to serving the needs of all of its customers. To help in determining how to continually improve services, the NWS is undertaking research on how satisfied users are with the weather products and services provided to the general public, and would appreciate your feedback. The purpose of this research, conducted in partnership with the federal government as part of the American Customer Satisfaction Index, is to help the NWS improve its weather products and services for you and others like you.

Your answers are voluntary, but your opinions are very important for this research. Your responses will be held completely confidential, and you will never be identified by name. CFI Group, a third party research and consulting firm, is administering this survey via a secure server. The time required to complete this survey will be dependent on how certain questions are answered, but it will likely take about 15 minutes, and is authorized by Office of Management and Budget Control No. 1505-0191.

Please click on the "Next" button below to begin the survey.

Demographics

1. To understand age-specific uses of weather information, please select your age category.
 - a. Under 18
 - b. 18-25
 - c. 26-35
 - d. 36-45
 - e. 46-55
 - f. 56-65
 - g. 66 and above
2. Are you? (select one)
 - a. Male
 - b. Female
3. Please provide the zip code for the area in which you live:
- 4-1. I use weather information for (select all that apply):
 - a. Dress for the day
 - b. Vacation, travel, or social activity planning
 - c. Personal safety and protection of property
 - d. Educational purposes
 - e. Job or business activities
 - f. Exterior home or yard work
 - g. Transportations decisions for work, school, recreation, etc.



Questionnaire continued

- 4-2. Please indicate your PRIMARY reason for accessing weather information? (select one)
- a. Dress for the day
 - b. Vacation, travel, or social activity planning
 - c. Personal safety and protection of property
 - d. Educational purposes
 - e. Job or business activities
 - f. Exterior home or yard work
 - g. Transportations decisions for work, school, recreation, etc.
- 4-3. If 4-1=e, Please indicate the type of job or business activities for which you use weather information? (open-end)
- 5-1. Have you ever obtained weather-related safety or educational materials from the NWS or other sources?
- a. Yes
 - b. No (**skip to Q6**)
- 5-2. Where did you obtain weather-related safety or educational materials (select all that apply)?
- a. Internet
 - b. Libraries
 - c. Local Community Events
 - d. Schools
 - e. Governmental Outreach Activities
 - f. Newspaper
 - g. NWS Office
 - h. Other (**please specify**)
- 5-3. What is your PREFERRED format for weather-related safety or educational materials (select only one)?
- a. Web pages
 - b. Newspaper
 - c. Books and guides (more than 2 pages)
 - d. Brochures and pamphlets (2 pages or less)
 - e. Promotional materials (e.g., bookmarks, magnets)
 - f. Exhibits & displays
 - g. CD/DVD/VHS-tapes
 - h. Other (**please specify**)



Questionnaire continued

Product Delivery

NOAA Weather Radio (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from NWS offices. NWR broadcasts NWS warnings, watches, advisories, general forecasts and other hazard information 24 hours a day. In addition to weather, NWR is an "all hazards" radio network broadcasting warning and post-event information for all types of hazards – both natural (such as earthquakes and volcanoes) and environmental (such as chemical releases and oil spills).

6-1. Do you own an all hazards NOAA Weather Radio?

- a. Yes
- b. No

6-2. Using a 10 point scale where 1 means Not at all Likely and 10 means Very Likely, please rate how likely you would be to use an all hazards NOAA Weather Radio that provided real-time hazardous weather information, e.g., watches, warnings, and advisories, if it became a standard feature in your vehicle?

7. Where do you typically obtain weather information? (select all that apply)

- a. Local TV Weathercast
- b. National TV Weathercast (e.g., CNN, The Weather Channel)
- c. Commercial or public radio
- d. All Hazards NOAA Weather Radio
- e. NOAA NWS websites (typically have a noaa.gov address)
- f. Non-NOAA NWS websites
- g. Internet Wireless (e.g., cell phone, PDA, pager)
- h. Newspaper
- i. Other (**please specify**)

8. Please indicate your PRIMARY source for weather information: (select only one)

- a. Local TV Weathercast
- b. National TV Weathercast (e.g., CNN, The Weather Channel)
- c. Commercial or Public Radio
- d. All Hazards NOAA Weather Radio
- e. NOAA NWS Websites (typically have a noaa.gov address)
- f. Non-NOAA NWS Websites
- g. Internet Wireless (e.g., cell phone, PDA, pager)
- h. Newspaper
- i. Other (**please specify**)

9-1. If 7 or 8=e, f, and/or g, then: Do you use high-speed (i.e., not dial-up) internet to access weather information?

- a. Yes
- b. No
- c. Not sure

9-2. If 7 or 8=e, f and/or g, then: Internet Mapping Systems (IMS) is an extension of Geographic Information Systems (GIS) technology for the Internet. This gives Internet users the capability to interact with data sets such as weather warnings, forecasts, and observed weather, and select desired overlays such as roads and county borders, and zoom factors. If IMS/GIS products on the Internet become widely available from the NWS, how likely would you be to use these products? Please use a 1 to 10 point scale where 1 means Not at all likely and 10 means Very Likely.



Questionnaire continued

Hazardous Weather Information

Issuing hazardous weather and flood watches, warnings, and advisories for the protection of life and property and the enhancement of the national economy is a primary mission of the NWS. The next series of questions will ask you about the quality of certain hazardous weather information the NWS provides.

10. Do you understand the difference between weather watches and weather warnings issued by the NWS?

- a. Yes
- b. No
- c. Not Sure

NWS issues long-duration weather watches when conditions are favorable for the development of hazardous weather events (winter storm, high wind or excessive heat) 12-48 hours in the future.

11-1. In the past 2 years, have you seen or heard a winter storm, high wind or excessive heat watch in your area?

- a. Yes
- b. No **(skip to 12-1)**
- c. Don't Know **(skip to 12-1)**

11-2. Please think about the last time you saw or heard a winter storm, high wind or excessive heat watch. Using a 10 point scale where 1 means Poor and 10 means Excellent, please rate the following:

- a. The accuracy of the watch information
- b. The amount of time you had to act
- c. Your understanding of what was expected to happen based on the information provided

11-3 Did you know what action to take when you saw or heard a winter storm, high wind or excessive heat watch?

- a. Yes
- b. No
- c. Not sure

11-4. How often do you take action based on winter storm, high wind or excessive heat watches? (select only one)

- a. Always
- b. Usually
- c. Sometimes
- d. Rarely
- e. Never

11-5. If Q11-2 a-c is less than 7, please comment on how you think NWS can improve its watches to better serve your needs. **(Open-ended response)**

The NWS also provides long-duration warnings (up to 36 hours in advance) about hazardous weather for winter storms, high wind, and excessive heat. Warnings are issued when hazardous weather is imminent or occurring.



Questionnaire continued

12-1. In the past 2 years, have you seen/heard a winter storm, high wind, or excessive heat warnings in your area?

- a. Yes
- b. No **(skip to Q13-1)**
- c. Don't Know **(skip to Q13-1)**

12-2. Please think about the last time you actually saw or heard a winter storm, high wind or excessive heat warning. Using a 10 point scale where 1 means Poor and 10 means Excellent, please rate the following:

- a. The accuracy of the warning information
- b. The amount of time you had to act
- c. Your understanding of what was expected to happen based on the information provided

12-3. Did you know what action to take when you saw or heard a winter storm, high wind or excessive heat warning?

- a. Yes
- a. No
- b. Not sure

12-4. How often do you take action based on winter storm, high wind or excessive heat warnings? (select only one)

- a. Always
- b. Usually
- c. Sometimes
- d. Rarely
- e. Never

12-5. If Q12-2 a-c is less than 7, please comment on how you think NWS can improve its warnings to better serve your needs. **(Open-ended response)**

13-1. Next, please think about tornado warnings. In the past 2 years, have you seen or heard a tornado warning in your area?

- a. Yes
- b. No **(skip to Q14)**
- c. Not sure **(skip to Q14)**

13-2. Please think about the last time you saw or heard a tornado warnings. Using a 10 point scale where 1 means Poor and 10 means Excellent, please rate the following:

- a. The accuracy of the tornado WARNING information
- b. The amount of time you had to act
- c. Your understanding of what was expected to happen based on the information provided

13-3. Did you know what action to take when you see or hear a tornado warning?

- a. Yes
- b. No
- c. Not sure



Questionnaire continued

13-4. How often do you take action based on tornado warnings?

- a. Always
- b. Usually
- c. Sometimes
- d. Rarely
- e. Never

13-5. (If Q13-2 a-c is less than 7), Please comment on how you think NWS can improve its tornado warnings to better serve your needs. **(Open-ended response)**

The NWS currently considers a thunderstorm severe when winds are at least 58 mph (which can cause large tree limbs to break) and/or hail is $\frac{3}{4}$ inch in diameter (about the size of a penny which can damage vegetation, dent vehicles, etc.) or larger.

14. Do you think this wind criterion should be?

- a. Kept at 58 mph (no change)
- b. Lower than 58 mph
- c. Higher than 58 mph

15. Do you think the hail criterion should be?

- a. Kept at $\frac{3}{4}$ inch (no change)
- b. Smaller than $\frac{3}{4}$ inch
- c. Increased to 1 inch (about the size of a quarter)

Freeze watches and warnings are issued when a killing freeze is expected during the locally defined growing season.

16-1. In the past 2 years, have you seen or heard a freeze watch or warning in your area?

- a. Yes
- b. No **(skip to Q17)**
- c. Not sure **(skip to Q17)**

16-2. Please think about the last time you actually saw or heard a freeze watch and/or warning. Using a 10 point scale where 1 means Poor and 10 means Excellent, please rate the following:

- a. The accuracy of the freeze watch/warning information
- b. The amount of time you had to act
- c. Your understanding of what was expected to happen based on the information provided

16-3. Did you know what action to take when you saw or heard the freeze watch and/or warning?

- a. Yes
- b. No
- c. Not sure

16-4. How often do you take action based on freeze watches and warnings?

- a. Always
- b. Usually
- c. Sometimes
- d. Rarely
- e. Never



Questionnaire continued

16-5 (If 16-2 a-c less than 7) Please comment on how the NWS can improve its freeze watches and warnings to better serve your needs.

In addition to warnings, the NWS issues weather advisories for less serious conditions that cause significant inconvenience and, if caution is not exercised, could lead to situations that may threaten life and/or property.

17. Do you understand the difference between weather warnings and advisories issued by the NWS?

- a. Yes
- b. No
- c. Not Sure

18. How often do you take action based on weather advisories?

- a. Always
- b. Usually
- c. Sometimes
- d. Rarely
- e. Never

19. What other information can the NWS provide you regarding hazardous weather events?
(open-ended response)



Questionnaire continued

Product Format

The National Weather Service can provide weather information in a variety of ways, some of which are presented on the next few pages. Using a 10 point scale where 1 means Not at all likely and 10 means Very Likely, rate how likely you would be to use each of the following product formats:

20. Text Forecast – Plain language weather elements forecast in specific time periods (pictured below):

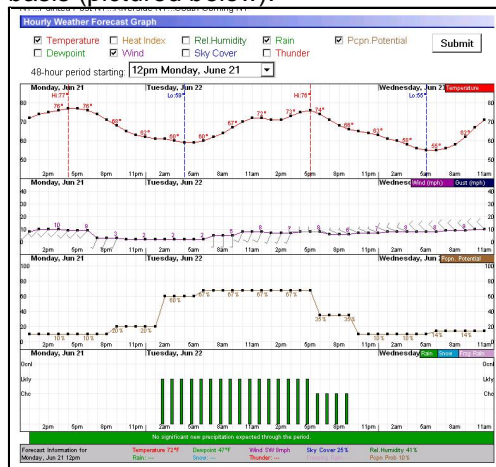
Today: Partly cloudy, with a high around 32. Calm wind becoming southwest between 4 and 7 mph.

Tonight: A 30 percent chance of snow after midnight. Mostly cloudy, with a low around 25. South wind 8 to 13 mph becoming west.

Saturday: A 30 percent chance of snow after noon. Mostly cloudy, with a high near 36. Northwest wind between 11 and 16 mph, with gusts as high as 28 mph.

Saturday Night: A 40 percent chance of snow before midnight. Mostly cloudy and blustery, with a low near 7. Wind chill values between -3 and 2.

21. Graphical (Element Meteorogram) Forecast – Standard weather elements (e.g., temperature, wind direction and speed, probability of precipitation, etc.) graphically displayed on an hourly basis (pictured below):

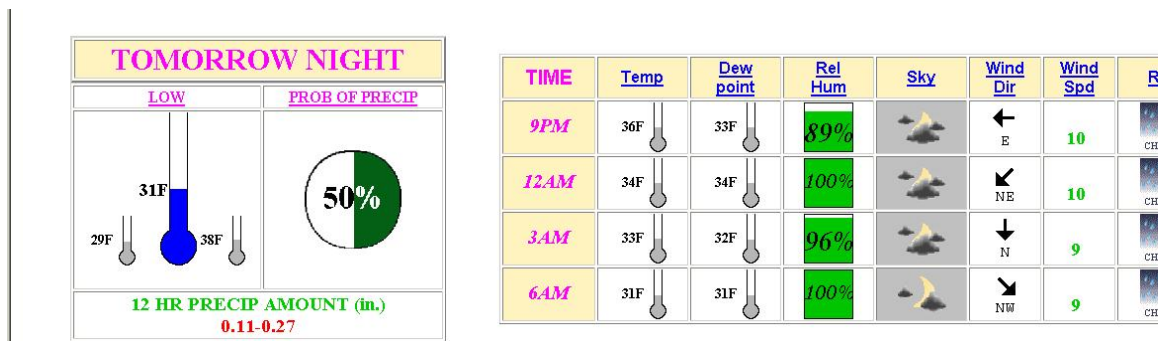




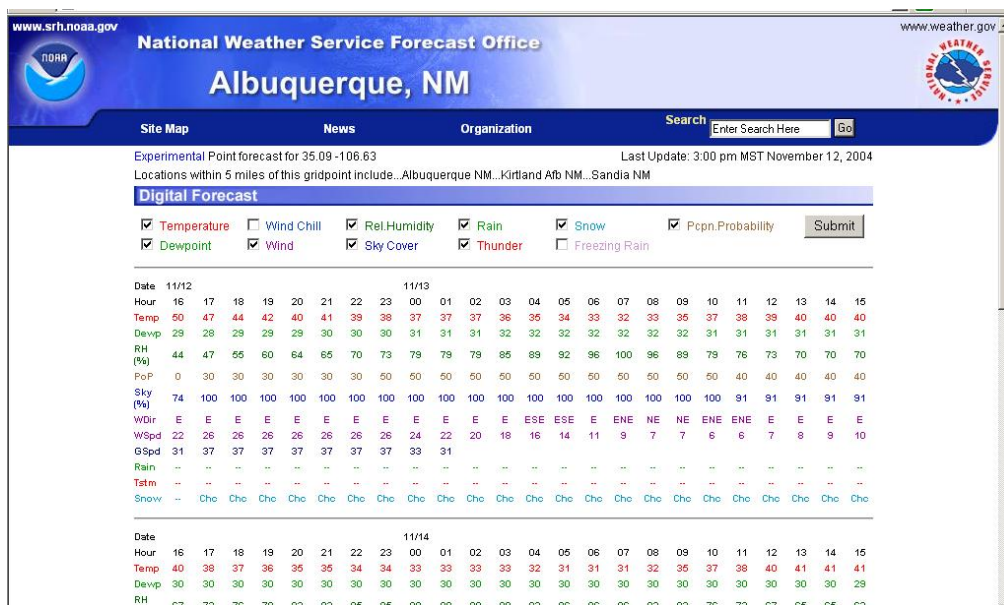
Questionnaire continued

Again, how likely would you be to use the following product formats?

22. Experimental Graphical 3-Hourly Forecast - Standard weather elements (e.g., temperature, wind direction and speed, probability of precipitation, etc.) graphically displayed in 3-hour time steps (pictured below):

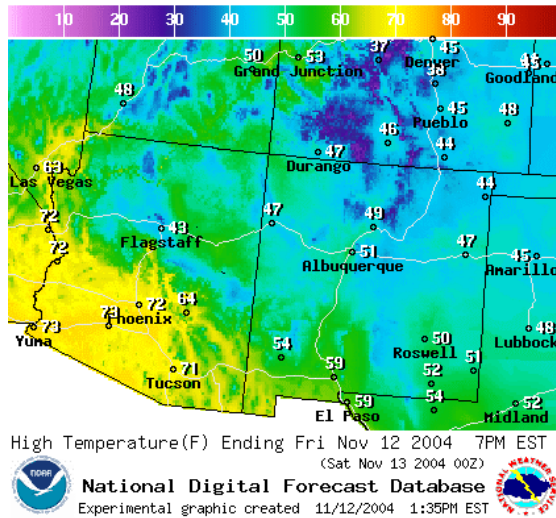


23. Tabular Only Forecast - Standard weather elements (e.g., temperature, wind direction and speed, probability of precipitation, etc.) displayed in a tabular form on an hourly basis (pictured below):



Questionnaire continued

24. Graphics Only Forecast - Standard weather elements (e.g., temperature, wind direction and speed, probability of precipitation, etc.) displayed as images on map backgrounds (pictured below):



Lastly, how likely would you be to use the following two product formats?








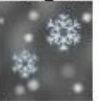

25. Text and Iconic Forecast – Pictorial daytime and nighttime forecasted weather conditions and abbreviated text (pictured below):

NWS Quad Cities, IA/IL

Point forecast for 41.6N -90.62W (Elev. 731 ft)

Last Update: 8:00 am CST December 17, 2004

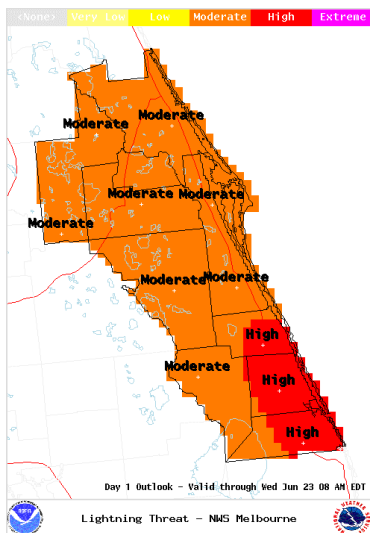
Forecast at a Glance

Today	Tonight	Saturday	Saturday Night	Sunday	Sunday Night	Monday	Monday Night	Tuesday
								
Partly Cloudy Hi 32°F	Chance Snow Lo 25°F	Chance Snow Hi 36°F	Chance Snow Lo 7°F	Blustery Hi 12°F	Partly Cloudy Lo 1°F	Chance Snow Hi 26°F	Chance Snow Lo 16°F	Chance Snow Hi 31°F



Questionnaire continued

26. Graphics and Text Forecast- This format type depicts both an image of a weather element and/or hazard along with text giving detailed information about the product (pictured below):



...THUNDERSTORM IMPACT...
DEEP TROPICAL MOISTURE REMAINS IN PLACE ACROSS CENTRAL FLORIDA TODAY. IN ADDITION...
STRENGTHENING SOUTHWEST WINDS AND AN APPROACHING UPPER LEVEL DISTURBANCE WILL RESULT IN A GREATER THAN NORMAL COVERAGE OF THUNDERSTORMS TODAY. STORMS WILL FORM EARLY THIS MORNING ALONG THE FLORIDA WEST COAST AND MOVE NORTHEAST AT 15 MPH...REACHING THE EASTERN PENINSULA MUCH EARLIER THAN RECENT DAYS. SCATTERED STORMS WILL FIRST IMPACT AREAS FROM ABOUT KISSIMMEE NORTH BY MID TO LATE MORNING...THEN AREAS FARTHER SOUTH AND ALONG THE ATLANTIC COAST PRIMARILY THIS AFTERNOON. A FEW OF THE STORMS WILL PRODUCE LOCALLY GUSTY WINDS...OF 40 TO 45 MPH...ALONG WITH FREQUENT CLOUD TO GROUND LIGHTNING. THE STORMS ARE EXPECTED TO SPREAD OFFSHORE AND DECREASE IN COVERAGE BY EARLY EVENING.

26-1. Are there any additional formats for which you would like to see NOAA NWS provide forecasts? If so, please indicate below.

Routine Products

27. Weather forecast information can be provided for different geographic areas. Using a 10 point scale where 1 means Not at all Useful and 10 means Very Useful, please rate the usefulness of weather forecasts provided for the following areas:

- Forecasts on a state level (general forecasts for an entire state)
- Forecasts on a county or sub-county level
- Forecasts for a specific city or greater metropolitan area
- Forecasts for major recreational locations (e.g., national parks)

28. Please indicate if there are other specified points or areas for which you would like to obtain a forecast. **(open-ended response)**



Questionnaire continued

29. Weather forecasts can contain many different elements. Using a 10 point scale where 1 means Not at all Useful and 10 means Very Useful, please rate the usefulness of the following weather elements.

- a. Maximum and Minimum Temperature
- b. Probability of Precipitation (e.g., chance, likely, 80%)
- c. Precipitation Type (e.g., whether precipitation will be in the form of rain, snow, or sleet)
- d. Air Quality (resulting from ozone, sulfur dioxide, particulate matter, etc.)
- e. Amount (inches) of precipitation (e.g., rain, snow, sleet, etc.)
- f. Sky Cover (e.g., sunny, partly cloudy, etc.)
- g. Wind Direction and Speed
- h. Ultraviolet (UV) radiation levels (prediction of ultraviolet radiation levels from the sun)
- i. Watch/Warning/Advisory Headline Information (e.g., High Wind Warning, Dense Fog Advisory, Severe Thunderstorm Warning)
- j. Extreme heat/extreme cold (measure of how hot/cold people feel)

30. What other information would you like the NWS to include in weather forecasts? (**Open-ended response**)

31. Weather forecasts can be provided for many different time periods. Using a 10 point scale where 1 means Not at All Useful and 10 means Very Useful, please rate the usefulness of:

- a. Forecasts for the next 6 hours (called short term forecasts)
- b. Forecasts for the next 1 to 3 days
- c. Forecasts for 4 through 7 days in the future

32. Longer range weather forecasts, (e.g., 4 to 7 days out), are prone to greater uncertainty than forecasts in the nearer term (e.g., 1 to 3 days out). How would you prefer to receive your longer range forecast information?

- a. A single value. (e.g., The maximum temperature 7 days from now will be 72 degrees)
- b. A range of values. (e.g. The most likely maximum temperature range 7 days from now will be between 70 and 76 degrees)
- c. Probabilistic values. (e.g. Seven days from now there is:
 - a 90% chance of the temperature exceeding 68 degrees;
 - a 50% chance of the temperature exceeding 72 degrees;
 - a 10% chance of the temperature exceeding 76 degrees)

33. The NWS provides data in many ways. Using a 10 point scale where 1 means Not at all Useful and 10 means Very Useful, please rate the usefulness of these other NWS routine products.

- a. Storm summaries (e.g., snow/rain amounts, high wind reports etc.)
- b. Technical/Area Forecast Discussions (brief summary of the basis for a weather forecast)



Questionnaire continued

STORM SUMMARY EXAMPLE

STORM SUMMARY NUMBER 7 FOR MAJOR WINTER STORM

NWS HYDROMETEOROLOGICAL PREDICTION CENTER CAMP SPRINGS MD

10 AM EST SUN DEC 7 2003

...THE MAJOR DECEMBER BLIZZARD OF 2003 CONTINUES TO POUND NEW ENGLAND WITH HEAVY SNOW...STRONG WINDS...DEEP DRIFTS...AND NEAR WHITEOUT VISIBILITY...

CURRENT WINTER STORM WARNINGS ARE IN EFFECT THROUGH SUNDAY FOR EASTERN LONG ISLAND...AND MOST OF NEW ENGLAND AND EXTREME NORTHEASTERN NEW YORK STATE. A BLIZZARD WARNING IS IN EFFECT FOR NORTHERN AND EASTERN MAINE UNTIL SUNDAY EVENING.

...FOR THE LATEST WATCHES AND WARNINGS SEE YOUR LOCAL NATIONAL WEATHER SERVICE FORECAST...

CLASSIC NOREASTER RAPIDLY DEEPEMED OFF CAPE COD. THE MINIMUM SURFACE PRESSURE IS NOW 29.10 INCHES OR 985 MILLIBARS. THE SURFACE LOW PRESSURE IS CURRENTLY CENTERED APPROXIMATELY 80 MILES SOUTHEAST OF CAPE COD NEAR 41.2N 68.3W. THE STORM SYSTEM IS HEADING TO THE EAST AND IS SLOWLY PULLING AWAY FROM THE COAST. THE SYSTEM IS EXPECTED TO START ACCELERATING EASTWARD BY NIGHT FALL WITH THE FORECAST TRACK TAKING THE SURFACE LOW SOUTH OF NOVA SCOTIA BY MIDNIGHT. HEAVY SNOW CONTINUES TO AFFECT EASTERN MASSACHUSETTS...AND PORTIONS OF MAINE AND NEW HAMPSHIRE.

...SELECTED STORM TOTALS IN INCHES AS OF 7 AM EST...

NEW YORK...

AVERILL PARK	25.0
NIVERVILLE	24.0
RIVERDALE	23.0
TROY	19.0
CENTRAL PARK ZOO	13.0
LAGUARDIA AIRPORT	12.0

CONNECTICUT...

WINDSOR LOCKS	17.0
STAFFORD SPRINGS	13.5
EAST KILLINGLY	12.0
UNION	8.5

etc...



Questionnaire continued

PRESENT STORM MOTION IS TO THE EAST WITH THE FORECAST TRACK KEEPS THE SURFACE LOW JUST OFF CAPE COD UNTIL IT PULLS AWAY FROM THE COAST OVERNIGHT. CURRENT RADAR SHOWS THE HEAVIEST PRECIPITATION BANDS IN CENTRAL MAINE. ALL PRECIPITATION IS IN THE FORM OF SNOW.

THE NEXT STORM SUMMARY WILL BE ISSUED AT 4 PM EST.



Questionnaire continued

TECHNICAL FORECAST DISCUSSION EXAMPLE

NATIONAL WEATHER SERVICE GRAY ME

400 AM EST WED NOV 10 2004

.SHORT TERM (TODAY THROUGH TONIGHT)...

ARCTIC HI PRES CENTERED OVER NEW ENGLAND WILL MOVE OFFSHORE TONIGHT. A RETURN SSWLY FLOW WILL DEVELOP TODAY WITH WARM AIR ADVECTION /WAA/ ALOFT BRINGING SOME MID/HI CLDS ACROSS THE AREA FROM W-E LATER THIS MORNING THROUGH TONIGHT. ACCEPTED GLOBAL FORECAST SYSTEM TEMPS FOR HIGHS TODAY SINCE CLOUDS AND A COLD START WILL BE HARD TO OVERCOME. TONIGHT TEMPS SHOULD BE WARMER AS CLOUDS AND WAA HELP PREVENT TEMPS FROM DROPPING TOO FAR.

&&

.LONG TERM (THURSDAY THROUGH TUESDAY)...

A COLD FRONT CROSSES THE REGION ON THU. ETA MODEL IS QUITE A BIT DRIER...EVEN WITH THE EFFECTS OF THE WAVE PASSING TO OUR SOUTH ON FRI. WENT WITH A SLIGHTLY WETTER ETA MODEL SOLUTION AND BROUGHT SOME SNOW TO THE MTNS THU NIGHT AND FRI AND A POSSIBLE MIX TO SOUTHERN SECTIONS. HIGH PRES BUILDS INTO CLEAR THE MTNS ON FRI BUT CLEARING SLOWED IN SOUTHERN SECTIONS BY THE WAVES MOVING ALONG THE FRONT.

&&

.AVIATION...

CLEAR CONDITIONS WITH LGT WINDS INTO MID MRNG BEFORE MID/HI CLDS SPILL ACROSS THE AREA. ANY CEILINGS THIS AFTN AND TONIGHT SHOULD STAY AT OR ABOVE TEN THSD FT.

&&

.MARINE...

NNWLY WINDS OF 10-20KT OVER THE COASTAL WATERS WILL CONTINUE TO DIMINISH RATHER QUICKLY THIS MORNING AS THE CENTER OF HIGH PRES CRESTS OVER THE WATERS. BY LATER TODAY A RETURN SSWLY FLOW WILL DEVELOP. WINDS THROUGH TONIGHT WILL REMAIN WELL BELOW SMALL CRAFT ADVISORY /SCA/ CRITERIA. WINDS WILL APPROACH SCA ON THU...BUT WILL LIKELY BE NEEDED OVER THE WEEKEND.

&&

.GYX WATCHES/WARNINGS/ADVISORIES...

ME...NONE.

NH...NONE.

MARINE...NONE.

&&



Questionnaire continued

NWS forecast offices issue short-term forecasts to provide users with more detail about on-going weather conditions, which usually cover the next 1 to 6 hours (see example below).

```
SHORT TERM FORECAST
NATIONAL WEATHER SERVICE GRAND JUNCTION CO
759 AM MST FRI DEC 17 2004

COZ022-171630-
ANIMAS RIVER BASIN-
INCLUDING THE CITIES OF...DURANGO...BAYFIELD...IGNACIO
759 AM MST FRI DEC 17 2004

.NOW...
FOG WILL PERSIST UNTIL MID-MORNING IN AREAS SOUTH OF DURANGO
ALONG HIGHWAYS 550 AND 172 SOUTH TO THE NEW MEXICO BORDER. VISIBILITY
WILL BE POOR IN SOME AREAS...DIPPING TO BELOW 1/2 MILE AT TIMES.
TRAVELERS ALONG HIGHWAY 550...AND HIGHWAY 172 IN THE VICINITY OF THE
LA PLATA COUNTY AIRPORT SHOULD BE PREPARED FOR POOR VISIBILITY. WITH
TEMPERATURES BELOW FREEZING...ICY SPOTS MAY BE PRESENT ON ROADS...
ESPECIALLY ON BRIDGES AND OVERPASSES.

$$
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34-1. With the exception of the example above, have you ever seen or heard a NWS short-term forecast?

- a. Yes
- b. No

34-2. If 34-1 yes, then: Using a 10 point scale where 1 means Not At All Useful and 10 means Very Useful, please rate how useful these short-term forecasts are to you.

34-3. If 34-1 no, then: Using a 10 point scale where 1 means Not At All Useful and 10 means Very Useful, please rate how useful these short-term forecasts would be to you.

34-4. If Q34-2 is less than 7, Please comment on how you think NWS can improve its short-term forecasts to better serve your needs.

Air pollution has been shown to cause health problems, especially for people with weakened immune systems, asthma, and other respiratory ailments. The Environmental Protection Agency (EPA) calculates an Air Quality Index (AQI) for five major air pollutants: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, EPA has established national air quality standards to protect public health. Currently AQI forecasts are issued each day for major metropolitan areas.

35. If a NOAA/EPA Air Quality Index Forecast capability was made available for your neighborhood for any hour of the day, and exceeded critical values that might impact health, which of the following would you most likely do? (select one)

- a. change your commuting method
- b. adjust your outdoor activities
- c. both of the above
- c. do nothing different



Questionnaire continued

The ozone layer shields the Earth from a portion of harmful Ultra-Violet (UV) radiation. Seasonal and weather variations cause different amounts of UV radiation to reach the Earth at any given time. The NWS and the Environmental Protection Agency (EPA) have developed the UV Index to predict tomorrow's UV radiation level at noon local time to help people take the necessary precautions to protect themselves from the sun. A partial example is shown below.

```
NOAA/EPA ULTRAVIOLET INDEX /UVI/ FORECAST
NWS CLIMATE PREDICTION CENTER CAMP SPRINGS MD
100 PM EST THU DEC 16 2004

VALID DEC 17 2004 AT SOLAR NOON /APPROXIMATELY NOON
LOCAL STANDARD TIME OR 100 PM LOCAL DAYLIGHT TIME/

THE UV INDEX IS CATEGORIZED BY THE WORLD HEALTH ORGANIZATION
AS FOLLOWS:

          UVI          EXPOSURE LEVEL
          0 1 2          LOW
          3 4 5          MODERATE
          6 7           HIGH
          8 9 10         VERY HIGH
          11 AND GREATER EXTREME

FOR HEALTH RELATED ISSUES...CONTACT EPA AT 1-800-296-1996
FOR TECHNICAL INFORMATION ABOUT THE UV INDEX....
GO TO THE NATIONAL WEATHER SERVICE UV INDEX WEB PAGE:
WWW.CPC.NCEP.NOAA.GOV/PRODUCTS/STRATOSPHERE/UV_INDEX

CITY          STATE  UVI          CITY          STATE
ALBUQUERQUE   NM      2          LITTLE ROCK   AR
ANCHORAGE     AK      0          LOS ANGELES    CA
ATLANTIC CITY  NJ      1          LOUISVILLE   KY
ATLANTA        GA      2          MEMPHIS        TN
BALTIMORE      MD      1          MIAMI          FL
BILLINGS      MT      1          MILWAUKEE      WI
BISMARCK       ND      1          MINNEAPOLIS    MN
BOISE          ID      1          MOBILE         AL
BOSTON         MA      1          NEW ORLEANS    LA
BUFFALO        NY      1          NEW YORK       NY
BURLINGTON     VT      1          NORFOLK        VA
CHARLESTON     WV      1          OKLAHOMA CITY  OK
CHARLESTON     SC      2          OMAHA          NE
CHEYENNE       WY      1          PHILADELPHIA   PA
CHICAGO        IL      1          PHOENIX        AZ
```

36-1. With the exception of the example above, have you ever seen or heard a UV Index forecast for your area, either in the format above or some other format?

- a. Yes
- b. No (skip to Q37-1)



Questionnaire continued

36-2. Using a 10 point scale where 1 means Not at All Useful and 10 means Very Useful, please rate the usefulness of the UV Index forecast.

36-3. The NWS currently provides a UV Index forecast for the next day at noon. How useful would you find the following additional forecasts? (1=Not at all Useful, 10=Very Useful)

- a. UV forecasts for days beyond tomorrow
- b. UV forecasts for other times of the day besides noon
- c. An alert when UV conditions are unusually high

Winter Weather Information

37-1. Do you live in an area which experiences winter storms?

- a. Yes
- b. No (**skip to Q39**)

37-2. Now consider the weather information you receive from the NWS regarding impending winter storms, and how you use this information. Using a 10 point scale where 1 means Not at all Useful and 10 means Very Useful, please rate the usefulness of the following information provided by the NWS.

- a. Snowfall rate (forecasts of the time when the heaviest/lightest snow is expected)
- b. Time of day snow begins/ends (e.g., morning rush hour, near midnight)
- c. Specific warnings (e.g., heavy snow, sleet, ice storm) instead of a single generic winter storm warning
- d. Specific advisories (e.g., snow, sleet, freezing rain) instead of a single generic winter weather advisory
- e. Time of precipitation type change (e.g., freezing rain to snow)
- f. Effect of high winds (e.g., blowing/drifting snow, ice covered wires/limbs, wind chill)

38. Assume the following winter weather scenario: A winter storm is expected to produce 12 inches of snow in the northern part of a state, 1 to 2 inches of sleet in the central part of that state, and 1/2 inch of ice in the southern part of the state. In your opinion, which is the best way of communicating this situation to the public? (select one):

- a. A single Winter Storm Warning for the entire state with the expected winter weather hazard in each geographic area described within the message.
- b. Three separate warnings referencing the winter weather hazards: A Heavy Snow Warning for the northern part of the state, a Sleet Warning for the central part of the state and an Ice Storm Warning for the southern part of the state.
- c. Does not make a difference.



Questionnaire continued

ACSI Benchmarks

Now, please think about your overall satisfaction with NOAA's National Weather Service products and services.

39. First, please consider all of your experiences with the NWS. Using a 10 point scale on which 1 means very dissatisfied and 10 means very satisfied, how satisfied are you with the products and services provided by the National Weather Service? **(internal note: response required)**

40. Using a 10 point scale on which 1 now means Falls Short of your Expectations and 10 means Exceeds your Expectations, to what extent have products and services provided by the National Weather Service Fallen Short Of, or Exceeded Your Expectations? **(internal note: response required)**

41. Imagine an ideal organization that provides weather products and services. How well do you think the National Weather Service compares with that ideal institution you just imagined? Please use a 10 point scale on which 1 means not very close to the ideal and 10 means very close to the ideal. **(internal note: response required)**

Desired Outcomes

42. Have you ever contacted or attempted to contact the National Weather Service to report a problem or make a suggestion with regards to its products and services?

- a. Yes
- b. No **(skip to Q44)**

43. On a 10 point scale on which 1 means Poor and 10 means Excellent, please rate the accessibility and responsiveness of NWS personnel to your problem or suggestion. **(internal note: response required)**

- a. Accessibility
- b. Responsiveness

44. Using a 10 point scale where 1 means Not at All Likely and 10 means Very Likely, how likely are you to take action based on the weather information you receive from the National Weather Service? **(internal note: response required)**

45. Using a 10 point scale, on which 1 means Not at All Confident and 10 means Very Confident, how confident are you that the National Weather Service will do a good job of providing weather products and services in the future? **(internal note: response required)**

Concluding Questions

46. Please provide any additional comments on how NOAA's National Weather Service can improve its current suite of products and services. This may include adding, deleting or revising existing products and services. **(Open-ended response)**

You have reached the end of the survey. Please click on the "Finish" button below to submit your survey.

The staff of the National Weather Service thanks you for your time and thoughtful feedback. Your input will be of great assistance as the agency works to improve its services.



Means and Frequencies for Survey Questions



Means and Frequencies for Survey Questions

DEMO_1 Age

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Under 18	1.00	256	2.4	2.4	2.4
18-25	2.00	843	8.0	8.0	10.4
26-35	3.00	1771	16.7	16.7	27.1
36-45	4.00	2508	23.7	23.7	50.8
46-55	5.00	2856	26.9	27.0	77.8
56-65	6.00	1723	16.3	16.3	94.1
66 and above	7.00	627	5.9	5.9	100.0
	-90.00	14	.1	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 4.374

Valid cases 10584 Missing cases 14

DEMO_2 Gender

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Male	1.00	8373	79.0	79.4	79.4
Female	2.00	2178	20.6	20.6	100.0
	-90.00	46	.4	Missing	
	-60.00	1	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.206

Valid cases 10551 Missing cases 47



Means and Frequencies for Survey Questions

DEMO4_1A Dress for the day

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	3408	32.2	32.2	32.2
Yes	1.00	7190	67.8	67.8	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .678

Valid cases 10598 Missing cases 0

DEMO4_1B Vacation, travel, or social activity planning

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	3152	29.7	29.7	29.7
Yes	1.00	7446	70.3	70.3	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .703

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

DEMO4_1C Personal safety and protection of proper

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	2977	28.1	28.1	28.1
Yes	1.00	7621	71.9	71.9	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .719

Valid cases 10598 Missing cases 0

DEMO4_1D Educational purposes

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	6808	64.2	64.2	64.2
Yes	1.00	3790	35.8	35.8	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .358

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

DEMO4_1E Job or business activities

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	5875	55.4	55.4	55.4
Yes	1.00	4723	44.6	44.6	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .446

Valid cases 10598 Missing cases 0

DEMO4_1F Exterior home or yard work

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	5170	48.8	48.8	48.8
Yes	1.00	5428	51.2	51.2	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .512

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

DEMO4_1G Transportation decisions for work, school, recreation, etc.

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	3576	33.7	33.7	33.7
Yes	1.00	7022	66.3	66.3	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .663

Valid cases 10598 Missing cases 0

DEMO4_1H No answer

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	461	4.3	99.8	99.8
	1.00	1	.0	.2	100.0
	-90.00	10136	95.6	Missing	
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .002

Valid cases 462 Missing cases 10136



Means and Frequencies for Survey Questions

DEMO4_2 Primary reason for accessing weather information

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Dress for the day	1.00	1673	15.8	15.8	15.8
Vacation, travel, or	2.00	1174	11.1	11.1	27.0
Personal safety and	3.00	2378	22.4	22.5	49.5
Educational purposes	4.00	1095	10.3	10.4	59.9
Job or business acti	5.00	1966	18.6	18.6	78.5
Exterior home or yar	6.00	327	3.1	3.1	81.6
Transportation decis	7.00	1943	18.3	18.4	100.0
	-90.00	40	.4	Missing	
	-8.00	2	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 3.877

Valid cases 10556 Missing cases 42

DEMO5_1 Obtained weather-related safety or educational materials

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	6101	57.6	57.6	57.6
No	2.00	4484	42.3	42.4	100.0
	-90.00	13	.1	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.424

Valid cases 10585 Missing cases 13



Means and Frequencies for Survey Questions

Page 6

DEMO5_2A Internet

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	5176	48.8	48.8	48.8
Yes	1.00	5422	51.2	51.2	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .512

Valid cases 10598 Missing cases 0

DEMO5_2B Libraries

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	9712	91.6	91.6	91.6
Yes	1.00	886	8.4	8.4	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .084

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

DEMO5_2C Local Community Events

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	9871	93.1	93.1	93.1
Yes	1.00	727	6.9	6.9	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .069

Valid cases 10598 Missing cases 0

DEMO5_2D Schools

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	10030	94.6	94.6	94.6
Yes	1.00	568	5.4	5.4	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .054

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

DEMO5_2E Governmental Outreach Activities

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	9701	91.5	91.5	91.5
Yes	1.00	897	8.5	8.5	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .085

Valid cases 10598 Missing cases 0

DEMO5_2F Newspaper

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	9110	86.0	86.0	86.0
Yes	1.00	1488	14.0	14.0	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .140

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

DEMO5_2G NWS Office

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	8435	79.6	79.6	79.6
Yes	1.00	2163	20.4	20.4	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .204

Valid cases 10598 Missing cases 0

DEMO5_2H Other

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	9545	90.1	90.1	90.1
Yes	1.00	1053	9.9	9.9	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .099

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

DEMO5_3 Preferred format for weather-related safety or educational

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Web pages	1.00	4756	44.9	78.4	78.4
Newspaper	2.00	114	1.1	1.9	80.2
Books and guides	3.00	404	3.8	6.7	86.9
Brochures and pamphl	4.00	275	2.6	4.5	91.4
Promotional material	5.00	48	.5	.8	92.2
Exhibits & displays	6.00	46	.4	.8	93.0
CD/DVD/VHS-tapes	7.00	247	2.3	4.1	97.1
Other	8.00	179	1.7	2.9	100.0
	-90.00	4221	39.8	Missing	
	-80.00	282	2.7	Missing	
	-60.00	24	.2	Missing	
	-9.00	2	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.808

Valid cases 6069 Missing cases 4529

Q6_1 Own an All Hazards NOAA Weather Radio

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	5395	50.9	51.2	51.2
No	2.00	5146	48.6	48.8	100.0
	-90.00	55	.5	Missing	
	-3.00	2	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.488

Valid cases 10541 Missing cases 57



Means and Frequencies for Survey Questions

Q6_2 Likelihood to use an all hazards NOAA Weather Radio

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	368	3.5	3.6	3.6
	2.00	273	2.6	2.6	6.2
	3.00	322	3.0	3.1	9.3
	4.00	218	2.1	2.1	11.4
	5.00	442	4.2	4.3	15.7
	6.00	313	3.0	3.0	18.7
	7.00	674	6.4	6.5	25.2
	8.00	950	9.0	9.2	34.4
	9.00	622	5.9	6.0	40.4
Very Likely	10.00	6162	58.1	59.6	100.0
	-90.00	54	.5	Missing	
	-11.00	200	1.9	Missing	
	Total	10598	100.0	100.0	

Mean 8.350

Valid cases 10344 Missing cases 254

Q7_A Local TV Weathercast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	3239	30.6	30.6	30.6
Yes	1.00	7359	69.4	69.4	100.0
	Total	10598	100.0	100.0	

Mean .694

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

Q7_B National TV Weathercast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	5565	52.5	52.5	52.5
Yes	1.00	5033	47.5	47.5	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .475

Valid cases 10598 Missing cases 0

Q7_C Commercial or Public Radio

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	6866	64.8	64.8	64.8
Yes	1.00	3732	35.2	35.2	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .352

Valid cases 10598 Missing cases 0

Q7_D All Hazards NOAA Weather Radio

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	6943	65.5	65.5	65.5
Yes	1.00	3655	34.5	34.5	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .345

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

Q7_E NOAA NWS websites

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	1443	13.6	13.6	13.6
Yes	1.00	9155	86.4	86.4	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .864

Valid cases 10598 Missing cases 0

Q7_F Non-NOAA NWS websites

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	6887	65.0	65.0	65.0
Yes	1.00	3711	35.0	35.0	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .350

Valid cases 10598 Missing cases 0

Q7_G Internet Wireless

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	9569	90.3	90.3	90.3
Yes	1.00	1029	9.7	9.7	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .097

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

Q7_H Newspaper

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	10467	98.8	98.8	98.8
Yes	1.00	131	1.2	1.2	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .012

Valid cases 10598 Missing cases 0

Q7_I Other

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	.00	10529	99.3	99.3	99.3
Yes	1.00	69	.7	.7	100.0
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean .007

Valid cases 10598 Missing cases 0



Means and Frequencies for Survey Questions

Q8 Primary source for weather information

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Local TV Weathercast	1.00	1702	16.1	16.1	16.1
National TV Weatherc	2.00	566	5.3	5.4	21.5
Commercial or Public	3.00	272	2.6	2.6	24.1
NOAA Weather Radio	4.00	560	5.3	5.3	29.4
NOAA NWS Websites	5.00	6329	59.7	60.0	89.3
Non-NOAA NWS Website	6.00	572	5.4	5.4	94.8
Internet Wireless	7.00	170	1.6	1.6	96.4
Newspaper	8.00	53	.5	.5	96.9
Other	9.00	331	3.1	3.1	100.0
	-90.00	41	.4	Missing	
	-60.00	1	.0	Missing	
	-10.00	1	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 4.316

Valid cases 10555 Missing cases 43

Q9_1 Use high-speed internet access

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	7221	68.1	75.0	75.0
No	2.00	2331	22.0	24.2	99.1
Not sure	3.00	82	.8	.9	100.0
	-90.00	434	4.1	Missing	
	-80.00	527	5.0	Missing	
	-60.00	3	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.259

Valid cases 9634 Missing cases 964



Means and Frequencies for Survey Questions

Q9_2 Likelihood to use IMS/GIS products avail

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	101	1.0	1.1	1.1
	2.00	58	.5	.6	1.7
	3.00	90	.8	.9	2.6
	4.00	85	.8	.9	3.5
	5.00	291	2.7	3.0	6.5
	6.00	253	2.4	2.6	9.2
	7.00	577	5.4	6.0	15.2
	8.00	1023	9.7	10.7	25.9
	9.00	855	8.1	8.9	34.8
Very Likely	10.00	6240	58.9	65.2	100.0
	-90.00	286	2.7	Missing	
	-80.00	527	5.0	Missing	
	-60.00	1	.0	Missing	
	-11.00	211	2.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	
Mean	8.996				

Valid cases 9573 Missing cases 1025

Q10 Understand difference between weather watches and warnings

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	10122	95.5	95.6	95.6
No	2.00	156	1.5	1.5	97.0
Not sure	3.00	313	3.0	3.0	100.0
	-90.00	7	.1	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	
Mean	1.074				

Valid cases 10591 Missing cases 7



Means and Frequencies for Survey Questions

Q11_1 Past 2 years seen or heard winter storm, high wind or excessive heat watch?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	10399	98.1	98.2	98.2
No	2.00	112	1.1	1.1	99.3
Don't know	3.00	74	.7	.7	100.0
	-90.00	13	.1	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.025

Valid cases 10585 Missing cases 13

Q11_2A Winter Storm, High Wind, Excessive Heat Watch

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	132	1.2	1.3	1.3
	2.00	103	1.0	1.0	2.3
	3.00	203	1.9	2.0	4.3
	4.00	257	2.4	2.5	6.8
	5.00	643	6.1	6.2	13.0
	6.00	698	6.6	6.8	19.8
	7.00	1795	16.9	17.4	37.2
	8.00	2289	21.6	22.2	59.5
	9.00	1494	14.1	14.5	74.0
Excellent	10.00	2676	25.3	26.0	100.0
	-90.00	12	.1	Missing	
	-80.00	199	1.9	Missing	
	-11.00	97	.9	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 7.819

Valid cases 10290 Missing cases 308



Means and Frequencies for Survey Questions

Q11_2B Winter Storm, High Wind, Excessive Heat Watch

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	30	.3	.3	.3
	2.00	33	.3	.3	.6
	3.00	61	.6	.6	1.2
	4.00	93	.9	.9	2.1
	5.00	301	2.8	3.0	5.1
	6.00	308	2.9	3.0	8.1
	7.00	967	9.1	9.5	17.6
	8.00	1733	16.4	17.1	34.7
	9.00	1844	17.4	18.1	52.8
Excellent	10.00	4791	45.2	47.2	100.0
	-90.00	37	.3	Missing	
	-80.00	199	1.9	Missing	
	-11.00	201	1.9	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	
Mean	8.773				
Valid cases	10161	Missing cases	437		



Means and Frequencies for Survey Questions

Q11_2C Winter Storm, High Wind, Excessive Heat Watch

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	25	.2	.2	.2
	2.00	25	.2	.2	.5
	3.00	50	.5	.5	1.0
	4.00	73	.7	.7	1.7
	5.00	225	2.1	2.2	3.9
	6.00	259	2.4	2.5	6.4
	7.00	723	6.8	7.0	13.4
	8.00	1475	13.9	14.3	27.7
	9.00	2107	19.9	20.5	48.2
Excellent	10.00	5333	50.3	51.8	100.0
	-90.00	64	.6	Missing	
	-80.00	199	1.9	Missing	
	-11.00	40	.4	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.970

Valid cases 10295 Missing cases 303

Q11_3 Know what action to take after winter storm, high wind or excessive heat watch?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	10127	95.6	97.7	97.7
No	2.00	100	.9	1.0	98.6
Not sure	3.00	141	1.3	1.4	100.0
	-90.00	31	.3	Missing	
	-80.00	199	1.9	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.037

Valid cases 10368 Missing cases 230



Means and Frequencies for Survey Questions

Q11_4 Frequency of action taken based on a winter storm, high wind
or
excessive heat watch

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Always	1.00	3059	28.9	29.4	29.4
Usually	2.00	4999	47.2	48.1	77.6
Sometimes	3.00	1820	17.2	17.5	95.1
Rarely	4.00	455	4.3	4.4	99.5
Never	5.00	56	.5	.5	100.0
	-90.00	10	.1	Missing	
	-80.00	199	1.9	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.985

Valid cases 10389 Missing cases 209

Q12_1 Past 2 years seen or heard winter storm, high wind, or
excessive
heat warning?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	10115	95.4	97.9	97.9
No	2.00	216	2.0	2.1	100.0
	-90.00	18	.2	Missing	
	-3.00	249	2.3	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.021

Valid cases 10331 Missing cases 267



Means and Frequencies for Survey Questions

Q12_2A Winter Storm, High Wind, Excessive Heat Warning

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	140	1.3	1.4	1.4
	2.00	107	1.0	1.1	2.5
	3.00	170	1.6	1.7	4.2
	4.00	217	2.0	2.2	6.3
	5.00	539	5.1	5.4	11.7
	6.00	689	6.5	6.9	18.6
	7.00	1482	14.0	14.8	33.4
	8.00	2081	19.6	20.8	54.2
	9.00	1834	17.3	18.3	72.6
Excellent	10.00	2746	25.9	27.4	100.0
	-90.00	46	.4	Missing	
	-80.00	483	4.6	Missing	
	-60.00	1	.0	Missing	
	-11.00	63	.6	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	
Mean	7.951				
Valid cases	10005	Missing cases	593		



Means and Frequencies for Survey Questions

Q12_2B Winter Storm, High Wind, Excessive Heat Warning

Value Label		Value	Frequency	Percent	Valid Percent	Cum Percent
Poor		1.00	32	.3	.3	.3
		2.00	36	.3	.4	.7
		3.00	60	.6	.6	1.3
		4.00	67	.6	.7	2.0
		5.00	247	2.3	2.5	4.5
		6.00	357	3.4	3.6	8.1
		7.00	897	8.5	9.1	17.2
		8.00	1715	16.2	17.3	34.5
		9.00	1942	18.3	19.6	54.1
Excellent		10.00	4535	42.8	45.9	100.0
		-90.00	98	.9	Missing	
		-80.00	483	4.6	Missing	
		-60.00	2	.0	Missing	
		-11.00	127	1.2	Missing	
			-----	-----	-----	
Total			10598	100.0	100.0	
Mean		8.774				
Valid cases		9888	Missing cases		710	



Means and Frequencies for Survey Questions

Q12_2C Winter Storm, High Wind, Excessive Heat Warning

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	23	.2	.2	.2
	2.00	17	.2	.2	.4
	3.00	33	.3	.3	.7
	4.00	55	.5	.6	1.3
	5.00	197	1.9	2.0	3.3
	6.00	236	2.2	2.4	5.6
	7.00	678	6.4	6.8	12.5
	8.00	1454	13.7	14.6	27.1
	9.00	2024	19.1	20.4	47.4
Excellent	10.00	5228	49.3	52.6	100.0
	-90.00	133	1.3	Missing	
	-80.00	483	4.6	Missing	
	-60.00	2	.0	Missing	
	-11.00	35	.3	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 9.015

Valid cases 9945 Missing cases 653

Q12_3 Know what action to take after winter storm, high wind or excessive heat warning?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	9848	92.9	98.3	98.3
No	2.00	72	.7	.7	99.0
Not sure	3.00	96	.9	1.0	100.0
	-90.00	98	.9	Missing	
	-80.00	483	4.6	Missing	
	-60.00	1	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.026

Valid cases 10016 Missing cases 582



Means and Frequencies for Survey Questions

Q12_4 Frequency of action taken based on a winter storm, high wind
or
excessive heat warning?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Always	1.00	3550	33.5	35.3	35.3
Usually	2.00	4636	43.7	46.1	81.4
Sometimes	3.00	1491	14.1	14.8	96.2
Rarely	4.00	333	3.1	3.3	99.6
Never	5.00	45	.4	.4	100.0
	-90.00	59	.6	Missing	
	-80.00	483	4.6	Missing	
	-60.00	1	.0	Missing	
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean 1.875

Valid cases 10055 Missing cases 543

Q13_1 Past 2 years seen or heard tornado warning

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	6267	59.1	59.2	59.2
No	2.00	3998	37.7	37.8	97.0
Not sure	3.00	321	3.0	3.0	100.0
	-90.00	12	.1	Missing	
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean 1.438

Valid cases 10586 Missing cases 12



Means and Frequencies for Survey Questions

Q13_2A Tornado Warning - Accuracy of the information

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	67	.6	1.1	1.1
	2.00	58	.5	1.0	2.0
	3.00	95	.9	1.6	3.6
	4.00	115	1.1	1.9	5.5
	5.00	348	3.3	5.7	11.2
	6.00	402	3.8	6.6	17.8
	7.00	749	7.1	12.3	30.1
	8.00	1063	10.0	17.4	47.5
	9.00	1021	9.6	16.7	64.2
Excellent	10.00	2181	20.6	35.8	100.0
	-90.00	13	.1	Missing	
	-80.00	4331	40.9	Missing	
	-11.00	155	1.5	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.170

Valid cases 6099 Missing cases 4499

Q13_2B Tornado Warning - Amount of time to act

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	87	.8	1.4	1.4
	2.00	97	.9	1.6	3.0
	3.00	140	1.3	2.3	5.3
	4.00	197	1.9	3.2	8.6
	5.00	401	3.8	6.6	15.1
	6.00	414	3.9	6.8	21.9
	7.00	728	6.9	11.9	33.9
	8.00	1030	9.7	16.9	50.8
	9.00	960	9.1	15.8	66.5
Excellent	10.00	2039	19.2	33.5	100.0
	-90.00	27	.3	Missing	
	-80.00	4331	40.9	Missing	
	-11.00	147	1.4	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 7.934

Valid cases 6093 Missing cases 4505



Means and Frequencies for Survey Questions

Q13_2C Tornado Warning - Expectations based on

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	33	.3	.5	.5
	2.00	25	.2	.4	.9
	3.00	52	.5	.8	1.8
	4.00	59	.6	1.0	2.7
	5.00	160	1.5	2.6	5.3
	6.00	156	1.5	2.5	7.9
	7.00	363	3.4	5.9	13.8
	8.00	696	6.6	11.3	25.1
	9.00	1061	10.0	17.2	42.3
Excellent	10.00	3548	33.5	57.7	100.0
	-90.00	53	.5	Missing	
	-80.00	4331	40.9	Missing	
	-60.00	1	.0	Missing	
	-11.00	60	.6	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.995

Valid cases 6153 Missing cases 4445

Q13_3 Know what action to take after tornado warning

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	6018	56.8	96.5	96.5
No	2.00	114	1.1	1.8	98.3
Not sure	3.00	104	1.0	1.7	100.0
	-90.00	29	.3	Missing	
	-80.00	4331	40.9	Missing	
	-60.00	2	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.052

Valid cases 6236 Missing cases 4362



Means and Frequencies for Survey Questions

Q13_4 Frequency of action taken based on tornado warning

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Always	1.00	3956	37.3	63.3	63.3
Usually	2.00	1301	12.3	20.8	84.2
Sometimes	3.00	527	5.0	8.4	92.6
Rarely	4.00	349	3.3	5.6	98.2
Never	5.00	114	1.1	1.8	100.0
	-90.00	20	.2	Missing	
	-80.00	4331	40.9	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.618

Valid cases 6247 Missing cases 4351

Q14 Wind criterion

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Kept at 58 mph	1.00	7240	68.3	69.0	69.0
Lower than 58	2.00	2900	27.4	27.6	96.6
Higher than 58	3.00	355	3.3	3.4	100.0
	-90.00	102	1.0	Missing	
	-4.00	1	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.344

Valid cases 10495 Missing cases 103



Means and Frequencies for Survey Questions

Q15 Hail criterion

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Kept at 3/4 inch	1.00	6875	64.9	65.6	65.6
Smaller than 3/4 inc	2.00	3080	29.1	29.4	95.0
Increased to 1 inch	3.00	521	4.9	5.0	100.0
	-90.00	122	1.2	Missing	
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean 1.393

Valid cases 10476 Missing cases 122

Q16_1 Past 2 years seen or heard freeze watch

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	8273	78.1	78.2	78.2
No	2.00	1588	15.0	15.0	93.2
Not sure	3.00	718	6.8	6.8	100.0
	-90.00	19	.2	Missing	
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean 1.286

Valid cases 10579 Missing cases 19



Means and Frequencies for Survey Questions

Q16_2A Freeze Watch or Warning - Accuracy of the freeze

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	43	.4	.5	.5
	2.00	28	.3	.3	.9
	3.00	56	.5	.7	1.6
	4.00	62	.6	.8	2.4
	5.00	251	2.4	3.1	5.5
	6.00	348	3.3	4.3	9.8
	7.00	824	7.8	10.3	20.1
	8.00	1480	14.0	18.4	38.5
	9.00	1670	15.8	20.8	59.3
Excellent	10.00	3262	30.8	40.7	100.0
	-90.00	13	.1	Missing	
	-80.00	2325	21.9	Missing	
	-60.00	1	.0	Missing	
	-11.00	235	2.2	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	
Mean	8.614				
Valid cases	8024	Missing cases	2574		



Means and Frequencies for Survey Questions

Q16_2B Freeze Watch or Warning - Amount of time

Value Label		Value	Frequency	Percent	Valid Percent	Cum Percent
Poor		1.00	26	.2	.3	.3
		2.00	18	.2	.2	.6
		3.00	36	.3	.5	1.0
		4.00	53	.5	.7	1.7
		5.00	199	1.9	2.5	4.2
		6.00	212	2.0	2.7	6.8
		7.00	574	5.4	7.2	14.0
		8.00	1071	10.1	13.4	27.4
		9.00	1636	15.4	20.5	47.8
Excellent		10.00	4174	39.4	52.2	100.0
		-90.00	47	.4	Missing	
		-80.00	2325	21.9	Missing	
		-60.00	1	.0	Missing	
		-11.00	226	2.1	Missing	
			-----	-----	-----	
Total			10598	100.0	100.0	
Mean		8.963				
Valid cases	7999	Missing cases	2599			



Means and Frequencies for Survey Questions

Q16_2C Freeze Watch or Warning - Expectations

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	16	.2	.2	.2
	2.00	5	.0	.1	.3
	3.00	19	.2	.2	.5
	4.00	26	.2	.3	.8
	5.00	119	1.1	1.5	2.3
	6.00	140	1.3	1.7	4.0
	7.00	372	3.5	4.6	8.7
	8.00	887	8.4	11.0	19.7
	9.00	1526	14.4	19.0	38.7
Excellent	10.00	4929	46.5	61.3	100.0
	-90.00	93	.9	Missing	
	-80.00	2325	21.9	Missing	
	-60.00	1	.0	Missing	
	-11.00	140	1.3	Missing	
Total		10598	100.0	100.0	

Mean 9.248

Valid cases 8039 Missing cases 2559

Q16_3 Know what action to take after freeze watch/warning

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	7916	74.7	96.4	96.4
No	2.00	146	1.4	1.8	98.2
Not sure	3.00	151	1.4	1.8	100.0
	-90.00	58	.5	Missing	
	-80.00	2325	21.9	Missing	
	-60.00	2	.0	Missing	
Total		10598	100.0	100.0	

Mean 1.055

Valid cases 8213 Missing cases 2385



Means and Frequencies for Survey Questions

Q16_4 Frequency of action taken based on freeze

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Always	1.00	2445	23.1	29.7	29.7
Usually	2.00	2858	27.0	34.7	64.4
Sometimes	3.00	1661	15.7	20.2	84.5
Rarely	4.00	908	8.6	11.0	95.6
Never	5.00	365	3.4	4.4	100.0
	-90.00	34	.3	Missing	
	-80.00	2325	21.9	Missing	
	-60.00	1	.0	Missing	
	-6.00	1	.0	Missing	
	Total	10598	100.0	100.0	

Mean 2.258

Valid cases 8237 Missing cases 2361

Q17 Understand difference between weather warnings and advisories

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	9928	93.7	94.0	94.0
No	2.00	251	2.4	2.4	96.4
Not sure	3.00	380	3.6	3.6	100.0
	-90.00	39	.4	Missing	
	Total	10598	100.0	100.0	

Mean 1.096

Valid cases 10559 Missing cases 39



Means and Frequencies for Survey Questions

Q18 Frequency of action taken based on weather advisories

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Always	1.00	1738	16.4	16.5	16.5
Usually	2.00	4158	39.2	39.4	55.8
Sometimes	3.00	3492	32.9	33.1	88.9
Rarely	4.00	994	9.4	9.4	98.3
Never	5.00	177	1.7	1.7	100.0
	-90.00	37	.3	Missing	
	-6.00	2	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 2.405

Valid cases 10559 Missing cases 39

Q20 Likelihood to use Text Forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	44	.4	.4	.4
	2.00	26	.2	.2	.7
	3.00	79	.7	.7	1.4
	4.00	101	1.0	1.0	2.4
	5.00	265	2.5	2.5	4.9
	6.00	355	3.3	3.4	8.3
	7.00	737	7.0	7.0	15.2
	8.00	1451	13.7	13.8	29.0
	9.00	1395	13.2	13.2	42.2
Very Likely	10.00	6089	57.5	57.8	100.0
	-90.00	32	.3	Missing	
	-60.00	1	.0	Missing	
	-11.00	23	.2	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.955

Valid cases 10542 Missing cases 56



Means and Frequencies for Survey Questions

Q21 Likelihood to use Graphical (Element Meteorogram) Forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	872	8.2	8.3	8.3
	2.00	460	4.3	4.4	12.7
	3.00	687	6.5	6.5	19.2
	4.00	635	6.0	6.1	25.3
	5.00	965	9.1	9.2	34.5
	6.00	719	6.8	6.9	41.3
	7.00	1052	9.9	10.0	51.4
	8.00	1217	11.5	11.6	63.0
	9.00	952	9.0	9.1	72.0
Very Likely	10.00	2936	27.7	28.0	100.0
	-90.00	25	.2	Missing	
	-11.00	78	.7	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 6.723

Valid cases 10495 Missing cases 103

Q22 Likelihood to use Experimental Graphical 3-Hourly Forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	555	5.2	5.3	5.3
	2.00	299	2.8	2.9	8.2
	3.00	499	4.7	4.8	13.0
	4.00	599	5.7	5.7	18.7
	5.00	1031	9.7	9.9	28.6
	6.00	892	8.4	8.5	37.1
	7.00	1263	11.9	12.1	49.2
	8.00	1544	14.6	14.8	64.0
	9.00	1131	10.7	10.8	74.8
Very Likely	10.00	2631	24.8	25.2	100.0
	-90.00	94	.9	Missing	
	-60.00	1	.0	Missing	
	-11.00	59	.6	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 7.012

Valid cases 10444 Missing cases 154



Means and Frequencies for Survey Questions

Q23 Likelihood to use Tabular Only Forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	1213	11.4	11.6	11.6
	2.00	757	7.1	7.2	18.9
	3.00	1066	10.1	10.2	29.1
	4.00	1098	10.4	10.5	39.6
	5.00	1403	13.2	13.4	53.0
	6.00	1041	9.8	10.0	63.0
	7.00	1069	10.1	10.2	73.2
	8.00	967	9.1	9.3	82.5
	9.00	557	5.3	5.3	87.8
Very Likely	10.00	1271	12.0	12.2	100.0
	-90.00	79	.7	Missing	
	-60.00	1	.0	Missing	
	-11.00	76	.7	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 5.413

Valid cases 10442 Missing cases 156

Q24 Likelihood to use Graphics Only Forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	344	3.2	3.3	3.3
	2.00	282	2.7	2.7	5.9
	3.00	465	4.4	4.4	10.4
	4.00	605	5.7	5.7	16.1
	5.00	984	9.3	9.3	25.4
	6.00	924	8.7	8.8	34.2
	7.00	1385	13.1	13.1	47.4
	8.00	1720	16.2	16.3	63.7
	9.00	1167	11.0	11.1	74.8
Very Likely	10.00	2658	25.1	25.2	100.0
	-90.00	21	.2	Missing	
	-11.00	43	.4	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 7.189

Valid cases 10534 Missing cases 64



Means and Frequencies for Survey Questions

Q25 Likelihood to use Text and Iconic Forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	113	1.1	1.1	1.1
	2.00	89	.8	.8	1.9
	3.00	134	1.3	1.3	3.2
	4.00	191	1.8	1.8	5.0
	5.00	396	3.7	3.8	8.8
	6.00	436	4.1	4.2	13.0
	7.00	827	7.8	7.9	20.8
	8.00	1441	13.6	13.7	34.6
	9.00	1452	13.7	13.8	48.4
Very Likely	10.00	5410	51.0	51.6	100.0
	-90.00	90	.8	Missing	
	-11.00	19	.2	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.632

Valid cases 10489 Missing cases 109

Q26 Likelihood to use Graphics and Text Forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	214	2.0	2.0	2.0
	2.00	176	1.7	1.7	3.7
	3.00	249	2.3	2.4	6.1
	4.00	342	3.2	3.2	9.3
	5.00	614	5.8	5.8	15.1
	6.00	618	5.8	5.9	21.0
	7.00	1185	11.2	11.3	32.3
	8.00	1641	15.5	15.6	47.9
	9.00	1521	14.4	14.4	62.3
Very Likely	10.00	3969	37.5	37.7	100.0
	-90.00	29	.3	Missing	
	-11.00	40	.4	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.003

Valid cases 10529 Missing cases 69



Means and Frequencies for Survey Questions

Q27_A State level forecasts

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	736	6.9	7.0	7.0
	2.00	588	5.5	5.6	12.6
	3.00	829	7.8	7.9	20.4
	4.00	685	6.5	6.5	27.0
	5.00	1347	12.7	12.8	39.7
	6.00	982	9.3	9.3	49.1
	7.00	1255	11.8	11.9	61.0
	8.00	1182	11.2	11.2	72.2
	9.00	699	6.6	6.6	78.9
Very Useful	10.00	2227	21.0	21.1	100.0
	-90.00	43	.4	Missing	
	-11.00	25	.2	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 6.322

Valid cases 10530 Missing cases 68

Q27_B County or sub-county level forecasts

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	73	.7	.7	.7
	2.00	63	.6	.6	1.3
	3.00	89	.8	.8	2.1
	4.00	107	1.0	1.0	3.2
	5.00	301	2.8	2.9	6.0
	6.00	380	3.6	3.6	9.6
	7.00	715	6.7	6.8	16.4
	8.00	1408	13.3	13.4	29.8
	9.00	1676	15.8	15.9	45.7
Very Useful	10.00	5727	54.0	54.3	100.0
	-90.00	32	.3	Missing	
	-11.00	27	.3	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.853

Valid cases 10539 Missing cases 59



Means and Frequencies for Survey Questions

Q27_C City or greater metropolitan area foreca

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	81	.8	.8	.8
	2.00	63	.6	.6	1.4
	3.00	77	.7	.7	2.1
	4.00	105	1.0	1.0	3.1
	5.00	300	2.8	2.9	6.0
	6.00	302	2.8	2.9	8.8
	7.00	567	5.4	5.4	14.2
	8.00	1141	10.8	10.9	25.1
	9.00	1731	16.3	16.5	41.6
Very Useful	10.00	6136	57.9	58.4	100.0
	-90.00	59	.6	Missing	
	-11.00	36	.3	Missing	
Total		10598	100.0	100.0	

Mean 8.969

Valid cases 10503 Missing cases 95

Q27_D Recreational locations forecasts

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	402	3.8	3.9	3.9
	2.00	301	2.8	2.9	6.9
	3.00	425	4.0	4.1	11.0
	4.00	417	3.9	4.1	15.1
	5.00	1062	10.0	10.4	25.4
	6.00	861	8.1	8.4	33.8
	7.00	1172	11.1	11.4	45.2
	8.00	1378	13.0	13.4	58.7
	9.00	1219	11.5	11.9	70.6
Very Useful	10.00	3018	28.5	29.4	100.0
	-90.00	105	1.0	Missing	
	-11.00	238	2.2	Missing	
Total		10598	100.0	100.0	

Mean 7.294

Valid cases 10255 Missing cases 343



Means and Frequencies for Survey Questions

Q29_A Maximum and Minimum Temperature

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	27	.3	.3	.3
	2.00	19	.2	.2	.4
	3.00	36	.3	.3	.8
	4.00	48	.5	.5	1.2
	5.00	197	1.9	1.9	3.1
	6.00	225	2.1	2.1	5.2
	7.00	509	4.8	4.8	10.0
	8.00	1058	10.0	10.0	20.0
	9.00	1268	12.0	12.0	32.0
Very Useful	10.00	7187	67.8	68.0	100.0
	-90.00	22	.2	Missing	
	-11.00	2	.0	Missing	
Total		10598	100.0	100.0	

Mean 9.269

Valid cases 10574 Missing cases 24

Q29_B Probability of Precipitation

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	42	.4	.4	.4
	2.00	22	.2	.2	.6
	3.00	38	.4	.4	1.0
	4.00	34	.3	.3	1.3
	5.00	95	.9	.9	2.2
	6.00	155	1.5	1.5	3.6
	7.00	392	3.7	3.7	7.4
	8.00	934	8.8	8.8	16.2
	9.00	1436	13.5	13.6	29.7
Very Useful	10.00	7434	70.1	70.3	100.0
	-90.00	13	.1	Missing	
	-11.00	3	.0	Missing	
Total		10598	100.0	100.0	

Mean 9.376

Valid cases 10582 Missing cases 16



Means and Frequencies for Survey Questions

Q29_C Precipitation Type

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	40	.4	.4	.4
	2.00	28	.3	.3	.6
	3.00	34	.3	.3	1.0
	4.00	40	.4	.4	1.3
	5.00	118	1.1	1.1	2.5
	6.00	152	1.4	1.4	3.9
	7.00	327	3.1	3.1	7.0
	8.00	805	7.6	7.6	14.6
	9.00	1348	12.7	12.8	27.4
Very Useful	10.00	7655	72.2	72.6	100.0
	-90.00	41	.4	Missing	
	-60.00	1	.0	Missing	
	-11.00	9	.1	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 9.412

Valid cases 10547 Missing cases 51

Q29_D Air Quality

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	397	3.7	3.8	3.8
	2.00	357	3.4	3.4	7.2
	3.00	476	4.5	4.5	11.7
	4.00	516	4.9	4.9	16.6
	5.00	1256	11.9	12.0	28.6
	6.00	1198	11.3	11.4	40.0
	7.00	1498	14.1	14.3	54.3
	8.00	1690	15.9	16.1	70.4
	9.00	1016	9.6	9.7	80.0
Very Useful	10.00	2095	19.8	20.0	100.0
	-90.00	43	.4	Missing	
	-11.00	56	.5	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 6.874

Valid cases 10499 Missing cases 99



Means and Frequencies for Survey Questions

Q29_E Amount of precipitation

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	27	.3	.3	.3
	2.00	17	.2	.2	.4
	3.00	36	.3	.3	.8
	4.00	67	.6	.6	1.4
	5.00	154	1.5	1.5	2.9
	6.00	210	2.0	2.0	4.8
	7.00	486	4.6	4.6	9.5
	8.00	1114	10.5	10.6	20.0
	9.00	1754	16.6	16.6	36.7
Very Useful	10.00	6676	63.0	63.3	100.0
	-90.00	33	.3	Missing	
	-11.00	24	.2	Missing	
	Total	10598	100.0	100.0	

Mean 9.233

Valid cases 10541 Missing cases 57

Q29_F Sky Cover

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	46	.4	.4	.4
	2.00	45	.4	.4	.9
	3.00	125	1.2	1.2	2.0
	4.00	175	1.7	1.7	3.7
	5.00	444	4.2	4.2	7.9
	6.00	582	5.5	5.5	13.4
	7.00	969	9.1	9.2	22.6
	8.00	1806	17.0	17.1	39.8
	9.00	1959	18.5	18.6	58.3
Very Useful	10.00	4391	41.4	41.7	100.0
	-90.00	39	.4	Missing	
	-11.00	17	.2	Missing	
	Total	10598	100.0	100.0	

Mean 8.508

Valid cases 10542 Missing cases 56



Means and Frequencies for Survey Questions

Q29_G Wind Direction and Speed

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	31	.3	.3	.3
	2.00	55	.5	.5	.8
	3.00	75	.7	.7	1.5
	4.00	124	1.2	1.2	2.7
	5.00	328	3.1	3.1	5.8
	6.00	524	4.9	5.0	10.8
	7.00	878	8.3	8.3	19.2
	8.00	1595	15.1	15.2	34.3
	9.00	1873	17.7	17.8	52.1
Very Useful	10.00	5033	47.5	47.9	100.0
	-90.00	52	.5	Missing	
	-11.00	30	.3	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.724

Valid cases 10516 Missing cases 82

Q29_H Ultraviolet radiation levels

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	443	4.2	4.2	4.2
	2.00	379	3.6	3.6	7.9
	3.00	517	4.9	4.9	12.8
	4.00	503	4.7	4.8	17.6
	5.00	1135	10.7	10.9	28.5
	6.00	1141	10.8	10.9	39.4
	7.00	1311	12.4	12.5	51.9
	8.00	1620	15.3	15.5	67.4
	9.00	1327	12.5	12.7	80.1
Very Useful	10.00	2080	19.6	19.9	100.0
	-90.00	90	.8	Missing	
	-11.00	52	.5	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 6.902

Valid cases 10456 Missing cases 142



Means and Frequencies for Survey Questions

Q29_I Watch/Warning/Advisory Headline Information

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	20	.2	.2	.2
	2.00	16	.2	.2	.3
	3.00	27	.3	.3	.6
	4.00	30	.3	.3	.9
	5.00	73	.7	.7	1.6
	6.00	119	1.1	1.1	2.7
	7.00	251	2.4	2.4	5.1
	8.00	656	6.2	6.3	11.4
	9.00	1372	12.9	13.1	24.6
Very Useful	10.00	7872	74.3	75.4	100.0
	-90.00	37	.3	Missing	
	-11.00	125	1.2	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 9.525

Valid cases 10436 Missing cases 162

Q29_J Extreme heat/extreme cold

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	161	1.5	1.5	1.5
	2.00	101	1.0	1.0	2.5
	3.00	190	1.8	1.8	4.3
	4.00	185	1.7	1.8	6.1
	5.00	444	4.2	4.2	10.3
	6.00	511	4.8	4.9	15.2
	7.00	780	7.4	7.5	22.7
	8.00	1311	12.4	12.5	35.2
	9.00	1711	16.1	16.3	51.5
Very Useful	10.00	5071	47.8	48.5	100.0
	-90.00	43	.4	Missing	
	-11.00	90	.8	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.506

Valid cases 10465 Missing cases 133



Means and Frequencies for Survey Questions

Page 54

Q31_A Forecasts for the next 6 hours

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	43	.4	.4	.4
	2.00	45	.4	.4	.8
	3.00	64	.6	.6	1.4
	4.00	75	.7	.7	2.2
	5.00	236	2.2	2.2	4.4
	6.00	287	2.7	2.7	7.1
	7.00	505	4.8	4.8	11.9
	8.00	1042	9.8	9.9	21.8
	9.00	1175	11.1	11.1	32.9
Very Useful	10.00	7079	66.8	67.1	100.0
	-90.00	33	.3	Missing	
	-11.00	14	.1	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 9.171

Valid cases 10551 Missing cases 47



Means and Frequencies for Survey Questions

Q31_B Forecasts for the next 1 to 3 days

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	17	.2	.2	.2
	2.00	13	.1	.1	.3
	3.00	18	.2	.2	.5
	4.00	29	.3	.3	.7
	5.00	100	.9	.9	1.7
	6.00	162	1.5	1.5	3.2
	7.00	392	3.7	3.7	6.9
	8.00	1017	9.6	9.6	16.6
	9.00	1755	16.6	16.6	33.2
Very Useful	10.00	7042	66.4	66.8	100.0
	-90.00	43	.4	Missing	
	-11.00	10	.1	Missing	
Total		10598	100.0	100.0	
Mean	9.367				
Valid cases	10545	Missing cases	53		



Means and Frequencies for Survey Questions

Q31_C Forecasts for 4 through 7 days in the future

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	132	1.2	1.3	1.3
	2.00	133	1.3	1.3	2.5
	3.00	230	2.2	2.2	4.7
	4.00	233	2.2	2.2	6.9
	5.00	580	5.5	5.5	12.4
	6.00	607	5.7	5.8	18.2
	7.00	1042	9.8	9.9	28.1
	8.00	1503	14.2	14.3	42.4
	9.00	1398	13.2	13.3	55.7
Very Useful	10.00	4657	43.9	44.3	100.0
	-90.00	66	.6	Missing	
	-60.00	1	.0	Missing	
	-11.00	16	.2	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.277

Valid cases 10515 Missing cases 83

Q32 Prefer to receive longer range forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Single value	1.00	1011	9.5	9.6	9.6
Range of values	2.00	6216	58.7	59.3	69.0
Probabilistic values	3.00	3253	30.7	31.0	100.0
	-90.00	118	1.1	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 2.214

Valid cases 10480 Missing cases 118



Means and Frequencies for Survey Questions

Q33_A Storm summaries

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	90	.8	.9	.9
	2.00	73	.7	.7	1.6
	3.00	128	1.2	1.2	2.8
	4.00	177	1.7	1.7	4.5
	5.00	359	3.4	3.4	7.9
	6.00	454	4.3	4.3	12.2
	7.00	919	8.7	8.8	21.0
	8.00	1458	13.8	13.9	34.9
	9.00	1552	14.6	14.8	49.8
Very Useful	10.00	5262	49.7	50.2	100.0
	-90.00	87	.8	Missing	
	-11.00	39	.4	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.645

Valid cases 10472 Missing cases 126



Means and Frequencies for Survey Questions

Q33_B Technical/Area Forecast Discussions

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	149	1.4	1.4	1.4
	2.00	113	1.1	1.1	2.5
	3.00	207	2.0	2.0	4.5
	4.00	264	2.5	2.5	7.0
	5.00	540	5.1	5.1	12.1
	6.00	585	5.5	5.6	17.7
	7.00	929	8.8	8.8	26.5
	8.00	1327	12.5	12.6	39.2
	9.00	1355	12.8	12.9	52.1
Very Useful	10.00	5038	47.5	47.9	100.0
	-90.00	45	.4	Missing	
	-60.00	1	.0	Missing	
	-11.00	45	.4	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.371

Valid cases 10507 Missing cases 91

Q34_1 Have you ever seen or heard a short-term

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	9281	87.6	87.9	87.9
No	2.00	1283	12.1	12.1	100.0
	-90.00	34	.3	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.121

Valid cases 10564 Missing cases 34



Means and Frequencies for Survey Questions

Q34_2 Short-term forecasts are useful

Value Label		Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00		28	.3	.3	.3
	2.00		26	.2	.3	.6
	3.00		46	.4	.5	1.1
	4.00		70	.7	.8	1.8
	5.00		182	1.7	2.0	3.8
	6.00		276	2.6	3.0	6.8
	7.00		660	6.2	7.1	13.9
	8.00		1322	12.5	14.3	28.2
	9.00		1454	13.7	15.7	43.9
Very Useful	10.00		5195	49.0	56.1	100.0
	-90.00		14	.1	Missing	
	-80.00		1317	12.4	Missing	
	-11.00		8	.1	Missing	
			-----	-----	-----	
Total			10598	100.0	100.0	
Mean		8.996				
Valid cases	9259	Missing cases	1339			



Means and Frequencies for Survey Questions

Q34_3 Short-term forecasts would be useful

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	27	.3	2.2	2.2
	2.00	16	.2	1.3	3.4
	3.00	35	.3	2.8	6.2
	4.00	42	.4	3.4	9.6
	5.00	85	.8	6.8	16.4
	6.00	103	1.0	8.2	24.7
	7.00	155	1.5	12.4	37.1
	8.00	225	2.1	18.0	55.1
	9.00	167	1.6	13.4	68.5
Very Useful	10.00	394	3.7	31.5	100.0
	-90.00	2	.0	Missing	
	-80.00	9315	87.9	Missing	
	-11.00	32	.3	Missing	
Total		10598	100.0	100.0	

Mean 7.769

Valid cases 1249 Missing cases 9349

Q35 NOAA/EPA Air Quality Index Forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Change your commutin	1.00	79	.7	.7	.7
Adjust your outdoor	2.00	4402	41.5	41.7	42.4
Both of the above	3.00	2014	19.0	19.1	61.5
Do nothing different	4.00	4067	38.4	38.5	100.0
	-90.00	34	.3	Missing	
	-5.00	2	.0	Missing	
Total		10598	100.0	100.0	

Mean 2.953

Valid cases 10562 Missing cases 36



Means and Frequencies for Survey Questions

Q36_1 Seen or heard UV Index forecast for your

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	5799	54.7	54.9	54.9
No	2.00	4769	45.0	45.1	100.0
	-90.00	30	.3	Missing	
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean 1.451

Valid cases 10568 Missing cases 30

Q36_2 UV Index forecast

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	189	1.8	3.4	3.4
	2.00	159	1.5	2.8	6.2
	3.00	231	2.2	4.1	10.3
	4.00	227	2.1	4.0	14.3
	5.00	513	4.8	9.1	23.5
	6.00	551	5.2	9.8	33.3
	7.00	903	8.5	16.1	49.3
	8.00	1029	9.7	18.3	67.6
	9.00	570	5.4	10.1	77.7
Very Useful	10.00	1252	11.8	22.3	100.0
	-90.00	148	1.4	Missing	
	-80.00	4799	45.3	Missing	
	-60.00	5	.0	Missing	
	-11.00	22	.2	Missing	
		-----	-----	-----	
	Total	10598	100.0	100.0	

Mean 7.145

Valid cases 5624 Missing cases 4974



Means and Frequencies for Survey Questions

Q36_3A UV forecasts for days beyond tomorrow

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	506	4.8	8.9	8.9
	2.00	340	3.2	6.0	14.9
	3.00	415	3.9	7.3	22.1
	4.00	360	3.4	6.3	28.5
	5.00	749	7.1	13.2	41.6
	6.00	607	5.7	10.7	52.3
	7.00	669	6.3	11.7	64.0
	8.00	733	6.9	12.9	76.9
	9.00	454	4.3	8.0	84.9
Very Useful	10.00	861	8.1	15.1	100.0
	-90.00	53	.5	Missing	
	-80.00	4799	45.3	Missing	
	-11.00	52	.5	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	
Mean 6.059					
Valid cases 5694 Missing cases 4904					



Means and Frequencies for Survey Questions

Q36_3B UV forecasts for other times of the day

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	440	4.2	7.8	7.8
	2.00	307	2.9	5.4	13.3
	3.00	357	3.4	6.3	19.6
	4.00	314	3.0	5.6	25.2
	5.00	648	6.1	11.5	36.7
	6.00	518	4.9	9.2	45.9
	7.00	600	5.7	10.6	56.5
	8.00	743	7.0	13.2	69.7
	9.00	558	5.3	9.9	79.6
Very Useful	10.00	1149	10.8	20.4	100.0
	-90.00	97	.9	Missing	
	-80.00	4799	45.3	Missing	
	-11.00	68	.6	Missing	
Total		10598	100.0	100.0	
Mean	6.458				
Valid cases	5634	Missing cases	4964		



Means and Frequencies for Survey Questions

Q36_3C Alert when UV conditions are unusually high

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	272	2.6	4.8	4.8
	2.00	179	1.7	3.1	7.9
	3.00	169	1.6	3.0	10.9
	4.00	136	1.3	2.4	13.3
	5.00	395	3.7	6.9	20.2
	6.00	308	2.9	5.4	25.6
	7.00	442	4.2	7.8	33.3
	8.00	720	6.8	12.6	46.0
	9.00	774	7.3	13.6	59.5
Very Useful	10.00	2307	21.8	40.5	100.0
	-90.00	64	.6	Missing	
	-80.00	4799	45.3	Missing	
	-11.00	33	.3	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 7.786

Valid cases 5702 Missing cases 4896

Q37_1 Live in an area which experiences winter storms

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	9021	85.1	85.2	85.2
No	2.00	1570	14.8	14.8	100.0
	-90.00	7	.1	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.148

Valid cases 10591 Missing cases 7



Means and Frequencies for Survey Questions

Q37_2A Snowfall rate

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	94	.9	1.1	1.1
	2.00	39	.4	.4	1.5
	3.00	66	.6	.7	2.2
	4.00	66	.6	.7	3.0
	5.00	191	1.8	2.1	5.1
	6.00	214	2.0	2.4	7.5
	7.00	486	4.6	5.4	12.9
	8.00	964	9.1	10.8	23.7
	9.00	1088	10.3	12.2	35.9
Very Useful	10.00	5735	54.1	64.1	100.0
	-90.00	40	.4	Missing	
	-80.00	1577	14.9	Missing	
	-11.00	38	.4	Missing	
	Total	10598	100.0	100.0	

Mean 9.072

Valid cases 8943 Missing cases 1655



Means and Frequencies for Survey Questions

Q37_2B Time of day snow begins/ends

Value Label		Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00		90	.8	1.0	1.0
	2.00		35	.3	.4	1.4
	3.00		55	.5	.6	2.0
	4.00		38	.4	.4	2.4
	5.00		139	1.3	1.6	4.0
	6.00		167	1.6	1.9	5.9
	7.00		342	3.2	3.8	9.7
	8.00		850	8.0	9.5	19.2
	9.00		1151	10.9	12.9	32.1
Very Useful	10.00		6077	57.3	67.9	100.0
	-90.00		42	.4	Missing	
	-80.00		1577	14.9	Missing	
	-11.00		35	.3	Missing	
				-----	-----	
Total			10598	100.0	100.0	
Mean		9.224				
Valid cases		8944	Missing cases		1654	



Means and Frequencies for Survey Questions

Q37_2C Specific warnings

Value Label		Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00		75	.7	.8	.8
	2.00		32	.3	.4	1.2
	3.00		38	.4	.4	1.6
	4.00		39	.4	.4	2.1
	5.00		91	.9	1.0	3.1
	6.00		129	1.2	1.4	4.5
	7.00		243	2.3	2.7	7.2
	8.00		636	6.0	7.1	14.3
	9.00		1111	10.5	12.4	26.7
Very Useful	10.00		6563	61.9	73.3	100.0
	-90.00		34	.3	Missing	
	-80.00		1577	14.9	Missing	
	-11.00		30	.3	Missing	
			-----	-----	-----	
Total			10598	100.0	100.0	
Mean		9.384				
Valid cases	8957	Missing cases	1641			



Means and Frequencies for Survey Questions

Q37_2D Specific advisories

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	75	.7	.8	.8
	2.00	36	.3	.4	1.2
	3.00	48	.5	.5	1.8
	4.00	42	.4	.5	2.2
	5.00	99	.9	1.1	3.4
	6.00	120	1.1	1.3	4.7
	7.00	302	2.8	3.4	8.1
	8.00	674	6.4	7.5	15.6
	9.00	1177	11.1	13.1	28.7
Very Useful	10.00	6379	60.2	71.3	100.0
	-90.00	36	.3	Missing	
	-80.00	1577	14.9	Missing	
	-11.00	33	.3	Missing	
Total		10598	100.0	100.0	
Mean	9.335				
Valid cases	8952	Missing cases	1646		



Means and Frequencies for Survey Questions

Q37_2E Time of precipitation type change

Value Label		Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00		64	.6	.7	.7
	2.00		35	.3	.4	1.1
	3.00		39	.4	.4	1.5
	4.00		29	.3	.3	1.9
	5.00		122	1.2	1.4	3.2
	6.00		193	1.8	2.2	5.4
	7.00		382	3.6	4.3	9.7
	8.00		818	7.7	9.2	18.8
	9.00		1315	12.4	14.7	33.5
Very Useful	10.00		5941	56.1	66.5	100.0
	-90.00		56	.5	Missing	
	-80.00		1577	14.9	Missing	
	-11.00		27	.3	Missing	
			-----	-----	-----	
Total			10598	100.0	100.0	
Mean		9.241				
Valid cases		8938	Missing cases		1660	



Means and Frequencies for Survey Questions

Q37_2F Effect of high winds

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Useful	1.00	74	.7	.8	.8
	2.00	45	.4	.5	1.3
	3.00	58	.5	.7	2.0
	4.00	66	.6	.7	2.7
	5.00	191	1.8	2.1	4.9
	6.00	260	2.5	2.9	7.8
	7.00	511	4.8	5.7	13.5
	8.00	987	9.3	11.1	24.6
	9.00	1338	12.6	15.0	39.6
Very Useful	10.00	5393	50.9	60.4	100.0
	-90.00	68	.6	Missing	
	-80.00	1577	14.9	Missing	
	-11.00	30	.3	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 9.029

Valid cases 8923 Missing cases 1675

Q38 Winter weather scenario: best way to communicate

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Single Winter Storm	1.00	1866	17.6	20.8	20.8
Three separate warni	2.00	6216	58.7	69.3	90.0
No difference	3.00	894	8.4	10.0	100.0
	-90.00	45	.4	Missing	
	-80.00	1577	14.9	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.892

Valid cases 8976 Missing cases 1622



Means and Frequencies for Survey Questions

Q39 Overall Satisfaction with NWS Products and Services

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Very Dissatisfied	1.00	27	.3	.3	.3
	2.00	25	.2	.2	.5
	3.00	40	.4	.4	.9
	4.00	52	.5	.5	1.4
	5.00	132	1.2	1.2	2.6
	6.00	193	1.8	1.8	4.4
	7.00	671	6.3	6.3	10.8
	8.00	1861	17.6	17.6	28.4
	9.00	2604	24.6	24.6	53.0
Very Satisfied	10.00	4967	46.9	47.0	100.0
	-11.00	26	.2	Missing	
Total		10598	100.0	100.0	

Mean 8.978

Valid cases 10572 Missing cases 26

Q40 How well NWS Products and Services meet expectations

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Falls Short of Expec	1.00	65	.6	.6	.6
	2.00	55	.5	.5	1.1
	3.00	90	.8	.9	2.0
	4.00	141	1.3	1.3	3.3
	5.00	518	4.9	4.9	8.2
	6.00	701	6.6	6.7	14.9
	7.00	1420	13.4	13.5	28.4
	8.00	2435	23.0	23.1	51.5
	9.00	2684	25.3	25.5	77.0
Exceeds Expectations	10.00	2428	22.9	23.0	100.0
	-11.00	61	.6	Missing	
Total		10598	100.0	100.0	

Mean 8.130

Valid cases 10537 Missing cases 61



Means and Frequencies for Survey Questions

Q41 How NWS Products and Services compare to ideal

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not very close to Id	1.00	44	.4	.4	.4
	2.00	45	.4	.4	.8
	3.00	98	.9	.9	1.8
	4.00	116	1.1	1.1	2.9
	5.00	282	2.7	2.7	5.6
	6.00	474	4.5	4.5	10.1
	7.00	1316	12.4	12.5	22.6
	8.00	2518	23.8	23.9	46.5
	9.00	2489	23.5	23.6	70.1
Very close to Ideal	10.00	3144	29.7	29.9	100.0
	-11.00	72	.7	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 8.393

Valid cases 10526 Missing cases 72

Q42 Contacted NWS to report a problem or make a suggestion

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Yes	1.00	2986	28.2	28.2	28.2
No	2.00	7611	71.8	71.8	100.0
	-90.00	1	.0	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 1.718

Valid cases 10597 Missing cases 1



Means and Frequencies for Survey Questions

Q43_A Accessibility of NWS personnel to your problem or suggestion

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	169	1.6	5.8	5.8
	2.00	45	.4	1.5	7.4
	3.00	69	.7	2.4	9.7
	4.00	56	.5	1.9	11.7
	5.00	133	1.3	4.6	16.3
	6.00	116	1.1	4.0	20.2
	7.00	259	2.4	8.9	29.2
	8.00	396	3.7	13.6	42.8
	9.00	406	3.8	14.0	56.8
Excellent	10.00	1255	11.8	43.2	100.0
	-80.00	7612	71.8	Missing	
	-11.00	82	.8	Missing	
	Total	10598	100.0	100.0	

Mean 8.001

Valid cases 2904 Missing cases 7694



Means and Frequencies for Survey Questions

Q43_B Responsiveness of NWS personnel to your problem or suggestion

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Poor	1.00	255	2.4	9.0	9.0
	2.00	73	.7	2.6	11.6
	3.00	71	.7	2.5	14.1
	4.00	66	.6	2.3	16.4
	5.00	148	1.4	5.2	21.7
	6.00	147	1.4	5.2	26.9
	7.00	210	2.0	7.4	34.3
	8.00	364	3.4	12.9	47.2
	9.00	377	3.6	13.3	60.5
Excellent	10.00	1118	10.5	39.5	100.0
	-80.00	7612	71.8	Missing	
	-11.00	157	1.5	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 7.584

Valid cases 2829 Missing cases 7769

Q44 Likelihood to take action based on weather

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all Likely	1.00	31	.3	.3	.3
	2.00	20	.2	.2	.5
	3.00	48	.5	.5	.9
	4.00	49	.5	.5	1.4
	5.00	126	1.2	1.2	2.6
	6.00	177	1.7	1.7	4.3
	7.00	588	5.5	5.6	9.8
	8.00	1416	13.4	13.4	23.3
	9.00	1869	17.6	17.7	41.0
Very Likely	10.00	6235	58.8	59.0	100.0
	-11.00	39	.4	Missing	
		-----	-----	-----	
Total		10598	100.0	100.0	

Mean 9.160

Valid cases 10559 Missing cases 39



Means and Frequencies for Survey Questions

Q45 Confidence that NWS will do a good job

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Not at all confident	1.00	30	.3	.3	.3
	2.00	28	.3	.3	.6
	3.00	52	.5	.5	1.0
	4.00	55	.5	.5	1.6
	5.00	142	1.3	1.3	2.9
	6.00	223	2.1	2.1	5.0
	7.00	702	6.6	6.7	11.7
	8.00	1842	17.4	17.5	29.2
	9.00	2412	22.8	22.9	52.0
Very Confident	10.00	5059	47.7	48.0	100.0
	-11.00	53	.5	Missing	
Total		10598	100.0	100.0	

Mean 8.958

Valid cases 10545 Missing cases 53